

ErbB4 CO-CRYSTAL

BACKGROUND OF THE INVENTION

The present invention relates to the crystal structure of the ErbB4 kinase domain (ErbB4K), specifically the ErbB4K in liganded form as well as methods of using the same in the discovery of ErbB4 inhibitors and in the treatment of diseases mediated by inappropriate ErbB4 activity.

Abberant protein tyrosine kinase (PTK) activity has been implicated in a variety of disorders including psoriasis, rheumatoid arthritis, bronchitis, as well as cancer. Development of effective treatments for such disorders is a constant and ongoing enterprise in the medical field. The ErbB family of PTKs, which includes c-ErbB-2, EGFR, and ErbB-4, is one group of PTKs that has attracted interest as a therapeutic target. Currently, of special interest, is the role of ErbB family PTKs in hyperproliferative disorders, particularly human malignancies. Consequently, inhibition of ErbB family PTKs should provide for disorders characterized by aberrant ErbB family PTK activity. The biological role of ErbB family PTKs and their implication in various disease states is discussed, for instance in US patent 5,773,476; International patent application WO99/35146; M.C Hung et al, *Seminars in Oncology*, 26: 4, Suppl. 12 (August) 1999, 51-59; Ulrich et al, *Cell*, 61:203-212, April 20, 1990; Modjtahedi et al, *Int'l J. of Oncology*, 13: 335-342, 1998; and J.R. Woodburn, *Pharmacol. Ther.*, 82: 2-3, 241-250, 1999.

Polypeptides, including ErbB4, have a three-dimensional structure determined by the primary amino acid sequence and the environment surrounding the polypeptide. This three-dimensional structure establishes the polypeptide's activity, stability, binding affinity, binding specificity, and other biochemical attributes. Thus, knowledge of a protein's three-dimensional

structure can provide much guidance in designing agents that mimic, inhibit, or improve its biological activity in soluble or membrane bound forms.

The three-dimensional structure of a polypeptide can be determined in a number of ways. Many of the most precise methods employ X-ray crystallography (See, e.g., Van Holde, (1971) Physical Biochemistry, Prentice-Hall, N. J., 221-239). This technique relies on the ability of crystalline lattices to diffract X-rays or other forms of radiation. Diffraction experiments suitable for determining the three-dimensional structure of macromolecules typically require high-quality crystals. Since such crystals have been unavailable for ErbB4, a three-dimensional structure of ErbB4 has proven difficult to elucidate.

The present inventors have developed such crystals and have now determined the crystal structure of the nonphosphorylated human ErbB4K complexed with an irreversible inhibitor to 2.5 Å resolution. Such a crystal structure is useful in discovering compounds suitable for inhibiting ErbB4 and for treating diseases characterized by aberrant ErbB4 activity.

BRIEF SUMMARY OF THE INVENTION

In one aspect of the present invention, there is provided an ErbB4 kinase domain in liganded crystalline form, comprising the amino acid sequence of SEQ ID NO: 1 and having the structural coordinates of Table 2.

In a second aspect of the present invention, there is provided a method of ErbB4 inhibitor design, comprising:

generating a three dimensional computer model which represents ErbB4 kinase domain in liganded form, said kinase domain described by the

amino acid sequence of SEQ ID NO: 1 and having the structural coordinates of Table 2;

evaluating compounds as potential ErbB4 inhibitors using said model;
and

selecting compounds for further testing based on said evaluation.

In a third aspect of the present invention, there is provided a method of ErbB4 inhibitor design, comprising:

generating a three dimensional computer model which represents an ErbB4 kinase domain in liganded form, said kinase domain described by the amino acid sequence of SEQ ID NO: 1 and having the structural coordinates of Table 2;

evaluating compounds as potential ErbB4 inhibitors using said model; wherein said evaluation comprises identifying compounds capable of at least one of the following ErbB4 kinase domain/compound interactions:

- (i) one or more interactions with amino acid residues of the ErbB4 kinase domain hinge region;
- (ii) one or more interactions with amino acid residues of the ErbB4 kinase domain adenine pocket,
- (iii) one or more interactions with amino acid residues of the ErbB4 kinase sugar pocket,
- (iv) one or more interactions with amino acid residues of the ErbB4 kinase domain back pocket, and
- (v) one or more interactions with amino acid residues of the ErbB4 kinase domain solvent interface; and

selecting compounds for further testing based on said evaluation.

In a fourth aspect of the present invention, there is provided a method of ErbB4 inhibitor design, comprising:

generating a three dimensional computer model which represents a ErbB4 kinase domain in liganded form, said kinase domain described by the amino acid sequence of SEQ ID NO: 1 and having the structural coordinates of Table 2;

evaluating compounds as potential ErbB4 inhibitors using said model; wherein said evaluation comprises identifying compounds capable of at least one of the following ErbB4 kinase domain/compound interactions:

- (i) one or more interactions with amino acid residues 796, 797, 798, 799, and 800;
- (ii) one or more interactions with amino acid residues 724, 749, and 850;
- (iii) one or more interactions with amino acid residues 848, 860, 803, 847, 732, and 725;
- (iv) one or more interactions with amino acid residues 732, 749, 751, 796, 861, 860, 772, 781, 783, 794, 796, and 862; and
- (v) one or more interactions with residues 801, 802, 803, 806, and 810; and

selecting compounds for further testing based on said evaluation.

In a fifth aspect of the present invention, there is provided a method of treating a disorder characterized by inappropriate ErbB4 activity in a mammal, comprising: administering to said mammal a therapeutically effective amount

of a compound that can form a complex with an ErbB4 kinase domain thereby resulting in a ErbB4 kinase domain in liganded form, said kinase domain in liganded form being described by the amino acid sequence of SEQ ID NO: 1 and the structural coordinates of Table 2, wherein said complex is characterized by at least one of the following ErbB4 kinase domain/compound interactions:

- (i) one or more interactions with amino acid residues of the ErbB4 kinase domain hinge region;
- (ii) one or more interactions with amino acid residues of the ErbB4 kinase domain adenine pocket,
- (iii) one or more interactions with amino acid residues of the ErbB4 kinase sugar pocket and phosphate region,
- (iv) one or more interactions with amino acid residues of the ErbB4 kinase domain back pocket, and
- (v) one or more interactions with amino acid residues of the ErbB4 kinase domain solvent interface.

In a sixth aspect of the present invention, there is provided a method of inhibiting ErbB4 in a mammal, comprising: administering to said mammal a therapeutically effective amount of a compound that can form a complex with a ErbB4 kinase domain thereby resulting in an ErbB4 kinase domain in liganded form, said kinase domain in liganded form being described by the amino acid sequence of SEQ ID NO: 1 and the structural coordinates of Table 2, wherein said complex is characterized by at least one of the following ErbB4 kinase domain/compound interactions:

- (i) one or more interactions with amino acid residues of the ErbB4 kinase domain hinge region;
- (ii) one or more interactions with amino acid residues of the ErbB4 kinase domain adenine pocket,

- (iii) one or more interactions with amino acid residues of the ErbB4 kinase sugar pocket and phosphate region,
- (iv) one or more interactions with amino acid residues of the ErbB4 kinase domain back pocket, and
- (v) one or more interactions with amino acid residues of the ErbB4 kinase domain solvent interface.

In a seventh aspect of the present invention, there is provided an ErbB4 kinase domain/inhibitor complex, comprising: an ErbB4 kinase domain form being described by the amino acid sequence of SEQ ID NO: 1 and the structural coordinates of Table 2 and a compound that can form a complex with the ErbB4 kinase domain said complex is characterized by at least one of the following ErbB4 kinase domain/compound interactions:

- (i) one or more interactions with amino acid residues of the ErbB4 kinase domain hinge region;
- (ii) one or more interactions with amino acid residues of the ErbB4 kinase domain adenine pocket,
- (iii) one or more interactions with amino acid residues of the ErbB4 kinase sugar pocket and phosphate region,
- (iv) one or more interactions with amino acid residues of the ErbB4 kinase domain back pocket, and
- (v) one or more interactions with amino acid residues of the ErbB4 kinase domain solvent interface.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 depicts the structure of two thienopyrimidine inhibitors before reaction with the protein.

Figure 2 depicts a ribbon representation of the ErbB4K complexed with an irreversible inhibitor. A loop that is disordered in the crystal structure is shown as a dashed line. The figure was prepared with RIBBONS.

Figure 3 depicts the binding of a thienopyrimidine inhibitor in the ATP binding site of ErbB4K. The inhibitor is highlighted with thick black lines. The hydrogen bond between the inhibitor and the backbone NH of Met799 is shown as a grey dashed line. The covalent bond between the inhibitor and Cys803 is shown as a black dashed line. The figure was created with QUANTA.

DETAILED DESCRIPTION OF THE INVENTION

Table 1 is a table summarizing the crystal and data statistics obtained from ErbB4K crystal forms. Data on the unit cell is presented, including data on the crystal space group, unit cell dimensions, molecules per asymmetric cell and crystal resolution.

Table 2 is a table of the atomic structure coordinate data obtained from X-ray diffraction from the liganded ErbB4K crystal form.

As used herein, the term "effective amount" means that amount of a drug or pharmaceutical agent that will elicit the biological or medical response of a tissue, system, animal or human that is being sought, for instance, by a researcher or clinician. Furthermore, the term "therapeutically effective amount" means any amount which, as compared to a corresponding subject who has not received such amount, results in improved treatment, healing, prevention, or amelioration of a disease, disorder, or side effect, or a decrease in the rate of advancement of a disease or disorder. The term also

includes within its scope amounts effective to enhance normal physiological function.

As used herein, the term "mutation" carries its traditional connotation and means a change, inherited, naturally occurring or introduced, in a nucleic acid or polypeptide sequence, and is used in its sense as generally known to those of skill in the art.

As used herein, the term "labeled" means the attachment of a moiety, capable of detection by spectroscopic, radiologic or other methods, to a probe molecule.

As used herein, the term "target cell" refers to a cell, into which it is desired to insert a nucleic acid sequence or polypeptide, or to otherwise effect a modification from conditions known to be standard in the unmodified cell. A nucleic acid sequence introduced into a target cell can be of variable length. Additionally, a nucleic acid sequence can enter a target cell as a component of a plasmid or other vector or as a naked sequence.

As used herein, the term "transcription" means a cellular process involving the interaction of an RNA polymerase with a gene that directs the expression as RNA of the structural information present in the coding sequences of the gene. The process includes, but is not limited to, the following steps: (a) the transcription initiation, (b) transcript elongation, (c) transcript splicing, (d) transcript capping, (e) transcript termination, (f) transcript polyadenylation, (g) nuclear export of the transcript, (h) transcript editing, and (i) stabilizing the transcript.

As used herein, the term "expression" generally refers to the cellular processes by which a biologically active polypeptide is produced from RNA.

As used herein, the term "transcription factor" means a cytoplasmic or nuclear protein which binds to a gene, or binds to an RNA transcript of such gene, or binds to another protein which binds to such gene or such RNA transcript or another protein which in turn binds to such gene or such RNA transcript, so as to thereby modulate expression of the gene. Such modulation can additionally be achieved by other mechanisms; the essence of "transcription factor for a gene" is that the level of transcription of the gene is altered in some way.

As used herein, the term "hybridization" means the binding of a probe molecule, a molecule to which a detectable moiety has been bound, to a target sample.

As used herein, the term "detecting" means confirming the presence of a target entity by observing the occurrence of a detectable signal, such as a radiologic or spectroscopic signal that will appear exclusively in the presence of the target entity.

As used herein, the term "sequencing" means determining the ordered linear sequence of nucleic acids or amino acids of a DNA or protein target sample, using conventional manual or automated laboratory techniques.

As used herein, the term "isolated" means for example oligonucleotides substantially free of other nucleic acids, proteins, lipids, carbohydrates or other materials with which they can be associated, such association being either in cellular material or in a synthesis medium. The term can also be applied to other molecule types including polypeptides, in which case the polypeptide will be substantially free of nucleic acids, carbohydrates, lipids and other undesired polypeptides.

As used herein, the term "substantially pure" means that the polynucleotide or polypeptide is substantially free of the sequences and molecules with which it is associated in its natural state, and those molecules used in the isolation procedure. The term "substantially free" means that the sample is at least 50%, preferably at least 70%, more preferably 80% and most preferably 90% free of the materials and compounds with which it is associated in nature.

As used herein, the term "primer" means a sequence comprising two or more deoxyribonucleotides or ribonucleotides, preferably more than three, and more preferably more than eight and most preferably at least about 20 nucleotides of an exonic or intronic region. Such oligonucleotides are preferably between ten and thirty bases in length.

As used herein, the term "DNA segment" means a DNA molecule that has been isolated free of total genomic DNA of a particular species. For example, a DNA segment encoding a erbB4 or erbB4K polypeptide refers to a DNA segment that encodes SEQ ID NO: 1 yet is isolated away from, or purified free from, total genomic DNA of a source species, such as *Homo sapiens*. Included within the term "DNA segment" are DNA segments and smaller fragments of such segments, and also recombinant vectors, including, for example, plasmids, cosmids, phages, viruses, and the like.

As used herein, the phrase "enhancer-promoter" means a composite unit that contains both enhancer and promoter elements. An enhancer-promoter is operatively linked to a coding sequence that encodes at least one gene product.

As used herein, the phrase "operatively linked" means that an enhancer-promoter is connected to a coding sequence in such a way that the transcription of that coding sequence is controlled and regulated by that enhancer-promoter. Techniques for operatively linking an enhancer-promoter to a coding sequence are well known in the art; the precise orientation and location relative to a coding sequence of interest is dependent, *inter alia*, upon the specific nature of the enhancer-promoter.

As used herein, the term "inhibitor candidate" means a substance that is believed to interact with another moiety, for example a given ligand that is believed to interact to at least partially inhibit the activity of a complete enzyme or enzyme polypeptide, or fragment thereof, and which can be subsequently evaluated for such an interaction and activity inhibition. In a like manner, the term "ErbB4 inhibitor candidate" means a substance that is believed to interact with another moiety, for example a given ligand that is believed to interact to at least partially inhibit the activity of a complete ErbB4 or ErbB4 polypeptide, or fragment thereof, and which can be subsequently evaluated for such an interaction and activity inhibition. Representative candidate compounds or substrates include xenobiotics such as drugs and other therapeutic agents, carcinogens and environmental pollutants, natural products and extracts, as well as endobiotics such as steroids, fatty acids and prostaglandins. Other examples of candidate substances that can be investigated using the methods of the present invention include, but are not restricted to, agonists and antagonists of a ErbB4 or ErbB4 polypeptide, toxins and venoms, viral epitopes, hormones (e.g., opioid peptides, steroids, etc.), hormone receptors, peptides, enzymes, enzyme substrates, co-factors, lectins, sugars, oligonucleotides or nucleic acids, oligosaccharides, proteins, small molecules and monoclonal antibodies.

As used herein, the term "modified" means an alteration from an

entity's normally occurring state. An entity can be modified by removing discrete chemical units or by adding discrete chemical units. The term "modified" encompasses detectable labels as well as those entities added as aids in purification.

As used herein, the term "interaction" means any relationship between atoms or molecules whereby atomic and/or molecular conditions or forces exist which promote binding equilibrium between such atoms or molecules. Suitable examples include, but are not limited to covalent, electrostatic, hydrophobic, hydrophilic, hydrogen, and van der Waals bonding. The nature of such bonding relationships is known in the art and is described for instance in Mathews et al (1990) *Biochemistry*, Chapter 2, pgs 30-54.

As used herein, the terms "structure coordinates" and "structural coordinates" are interchangeable and mean mathematical coordinates derived from mathematical equations related to the patterns obtained on diffraction of a monochromatic beam of X-rays by the atoms (scattering centers) of a molecule, for instance ErbB4K, in crystal form. The diffraction data are used to calculate an electron density map of the repeating unit of the crystal. The electron density maps are used to establish the positions of the individual atoms within the unit cell of the crystal. Those of skill in the art understand that a set of structure coordinates determined by X-ray crystallography is not without standard error. For the purpose of this invention, any set of structure coordinates for ErbB4 or a ErbB4K mutant that have a root mean square (RMS) deviation from ideal of no more than 1.5 Å, when superimposed using the polypeptide backbone atoms on the structure coordinates listed in Table 2, shall be considered identical, except that for the activation loop and nucleotide binding loop such deviation from ideal have a RMS of no more than 10 Å.

As used herein, the term "asymmetric unit" means part of a symmetric object from which the whole is built up by repeats. Thus, it is the smallest unit from which the object can be generated by the symmetry operations of its point group.

As used herein, the term "molecular replacement" means a method that involves generating a preliminary model of ErbB4 or ErbB4K mutant crystal whose structure coordinates are unknown, by orienting and positioning a molecule whose structure coordinates are known within the unit cell of the unknown crystal so as best to account for the observed diffraction pattern of the unknown crystal. Phases can then be calculated from this model and combined with the observed amplitudes to give an approximate Fourier synthesis of the structure whose coordinates are unknown. This, in turn, can be subject to any of the several forms of refinement to provide a final, accurate structure of the unknown crystal (Lattman, (1985) in *Methods in Enzymology*, 115: 55-77). Using the structure coordinates of erbB4K and erbB4K in liganded form provided by this invention, molecular replacement can be used to determine the structure coordinates of a crystalline mutant or homologue of ErbB4K or of a different crystal form of ErbBK.

As used herein, the terms " β -sheet" and "beta sheet" are interchangeable and mean the conformation of a polypeptide chain stretched into an extended zig-zig conformation. Portions of polypeptide chains that run "parallel" all run in the same direction. Polypeptide chains that are "antiparallel" run in the opposite direction from the parallel chains.

As used herein, the terms " α -helix" and "alpha helix" are interchangeable and mean the conformation of a polypeptide chain wherein the polypeptide backbone is wound around the long axis of the molecule in a left-handed or right-handed direction. The substituent groups of the amino

acids protrude outward from the helical backbone, wherein the repeating unit of the structure is a single turn of the helix, which extends about 0.56 nm along the long axis.

As used herein, the term "mutant" means a polypeptide which is obtained by replacing at least one amino acid residue in a native erbB4 or erbB4K polypeptide with a different amino acid residue and/or by adding and/or deleting amino acid residues within the native polypeptide or at the N- and/or C-terminus of a polypeptide corresponding to a native erbB4 or erbB4K and which has substantially the same three-dimensional structure as the native erbB4 or erbB4K from which it is derived. By having substantially the same three-dimensional structure is meant having a set of atomic structure coordinates that have a root mean square deviation (RMS deviation) of less than or equal to about 1.5 Å, (10 Å for the activation loop and nucleotide binding loop) when superimposed with the atomic structure coordinates of the native erbB4 or erbB4K from which the mutant is derived when at least about 50% to 100% of the C α atoms of the native erbB4 or erbB4K are included in the superposition. A mutant can have, but need not have, autophosphorylation activity.

As used herein, the term "space group" means a group or array of operations consistent with an infinitely extended regularly repeating pattern. It is the symmetry of a three-dimensional structure, or the arrangement of symmetry elements of a crystal. There are 230 space group symmetries possible; however, there are only 65 space group symmetries available for biological structures.

As used herein, the term "symmetry" means some spatial manipulation of an object resulting in an indistinguishable object. A symmetric object can, therefore, be superimposed on itself by some operation.

As used herein, the term "unit cell" means the fundamental portion of a crystal structure that is repeated infinitely by translation in three dimensions. A unit cell is characterized by three vectors a , b , and c , not located in one plane, which form the edges of a parallelepiped. Angles α , β and γ define the angles between the vectors: angle α is the angle between vectors b and c ; angle β is the angle between vectors a and c ; and angle γ is the angle between vectors a and b . The entire volume of a crystal can be constructed by regular assembly of unit cells; each unit cell comprises a complete representation of the unit of pattern, the repetition of which builds up the crystal.

As used herein, "monoclinic unit cell" means a unit cell wherein $a \neq b \neq c$ and $\alpha = \gamma = 90^\circ$ and $\beta \neq 90^\circ$. The vectors a , b and c describe the unit cell edges and the angles α , β , and γ describe the unit cell angles.

As used herein, "orthorhombic unit cell" means a unit cell wherein $a \neq b \neq c$; and $\alpha = \beta = \gamma = 90^\circ$. The vectors a , b and c describe the unit cell edges and the angles α , β , and γ describe the unit cell angles.

As used herein, the term "crystal lattice" means the array of points defined by the vertices of packed unit cells.

As used herein, the term "active site" means that site in the erbB4K domain where substrate peptide binding, ATP binding and catalysis occur. For erbB4, the active site comprises at least the activation loop and the nucleotide binding loop.

As used herein, the term "activation loop" refers to a loop in tyrosine kinase domains between the conserved AspPheGly sequence and the conserved AlaProGlu sequence that is believed to act as a regulatory loop.

As used herein the terms "nucleotide-binding loop" and "glycine-rich loop" are synonymous and mean a loop in an RTK which contains the protein kinase-conserved glycine-rich consensus sequence.

As used herein, the term "autophosphorylation site" means a residue or residues in erbB4K that is phosphorylated by a domain of erbB4 itself.

As used herein the term "juxtamembrane region" means that portion of erbB4K located between the transmembrane helix and the tyrosine kinase domain.

As used herein, the terms "kinase insert" and "kinase insert domain" are synonymous and mean an additional domain not found in non-receptor tyrosine kinases or serine/threonine kinases. It is found between helices α D and α E in the C-terminal domain of receptor tyrosine kinases and can vary greatly in sequence and length.

As used herein, the term "C-terminal tail" means that region of an RTK that extends beyond the final helix of the C-terminal domain of the RTK.

As used herein, the term "N-terminal domain" means that region of an RTK that has a defined structure and precedes in sequence the hinge region.

As used herein, the term "modulate" means an increase, decrease, or other alteration of any or all chemical and biological activities or properties of a wild-type or mutant erbB4 or erbB4K polypeptide.

Description of ErbB4K structure

The overall architecture of ErbB4K was analogous to structures reported previously for both serine/threonine and tyrosine protein kinases (Johnson et al, *Cell*, 85: 149-158; Cox et al, *Curr. Opin. Struct. Biol.*, 4: 893-901). A C α trace of ErbB4 is shown in Figure 2, where kinase secondary structural elements are labeled according to the convention originally given for cAPK (Knighton et al, *Science*, 253:407-413). ErbB4K folds into two domains, with catalysis occurring in a cleft between the two domains. Residues in the N-terminal domain are primarily responsible for ligating ATP, while residues in the C-terminal domain are involved in catalysis and substrate binding.

The N-terminal domain (residues 690-801) folds into a twisted β -sheet and one α -helix. The larger C-terminal domain (residues 802-999) contains eight α -helices (α D- α I) and a set of anti-parallel β -strands (β 6/ β 7). Strands 6 and 7 are positioned at the interdomain interface adjacent to the N-terminal β -sheet. Like other kinases, ErbB4K also contains functionally important loop regions: the glycine-rich nucleotide binding loop (residues 725-730), the catalytic loop (residues 841-848) and the activation loop (residues 861-890), which will be described in further detail below.

Activation loop

Protein kinases contain a large flexible loop, called the activation loop or A-loop, whose conformation is believed to regulate kinase activity. In many kinases, the conformation of the A-loop is controlled by the phosphorylation of specific residues within this region (Johnson et al). The

activation loop generally begins with a conserved AspPheGly sequence (ErbB4K 861) and ends at a conserved AlaProGlu (ErbB4K 890, AlaLeuGlu in ErbB4K) (Johnson et al). In structures of inactive kinases, portions of this loop are often disordered. In those structures where the A loop is ordered, it often blocks either the substrate or ATP binding sites (Mohammadi et al; Wybenga-Groot et al; Hubbard et al – 1997; Hubbard et al – 1994; McTigue et al; and Xu et al). Upon phosphorylation, the A-loop is repositioned to contact residues in the C-terminal domain (Hubbard et al – 1997). The activating phosphate can then interact with a cluster of basic residues, which includes a conserved arginine (ErbB4K R842), that precedes the catalytic aspartate (ErbB4K D843). The aspartyl residue of the AspPheGly motif ligates a Mg^{2+} ion, which, in turn contacts the β and γ phosphates of ATP.

In ErbB4K, the activation loop corresponds to residues 861-890 and contains a single tyrosine at position 875. In the ErbB4K structure presented, the A-loop is completely ordered and does not significantly block either the ATP or substrate binding sites. Unlike other A loops observed to date, the A loop in ErbB4 contains a short helix (helix A') immediately following the AspPheGly motif.

In ErbB4, Tyr875 is found in a similar position within the A-loop as tyrosines required for activation of other tyrosine kinases. The side chain of this residue in the ErbB4K crystal structure is pointing towards the interior of the protein rather than solvent and its OH forms a hydrogen bond to the backbone carbonyl of Cys891. It is not clear whether phosphorylation of this tyrosine in ErbB4 is required for full activity of the kinase.

Nucleotide binding loop

The nucleotide binding loop (NB loop) contains residues responsible for binding the triphosphate moiety of ATP in the correct position for catalysis

(Johnson et al and Cox et al). This glycine-rich loop is believed to be quite flexible and is often either disordered or has high b-factors in many unliganded kinase structures sites (Mohammadi et al; Wybenga-Groot et al; Hubbard et al – 1997; Hubbard et al – 1994; McTigue et al; and Xu et al). In ErbB4K, this loop is ordered and occupies a similar position to that seen in other kinase structures.

Catalytic loop

The catalytic loop of protein kinases lies between αE and $\beta 7$ and contains an invariant aspartic acid (D843 in ErbB4) that serves as the catalytic base in the phosphotransfer reaction (Johnson et al). The sequence (HRDLAARN), as well as the backbone and side chain positions of this loop are similar to those in the unliganded EphB2, FGFR1, Tie2, IRK and VEGFR2 and in the ternary phosphorylated IRK complex structures sites (Mohammadi et al; Wybenga-Groot et al; Hubbard et al – 1997; Hubbard et al – 1994; and McTigue et al).

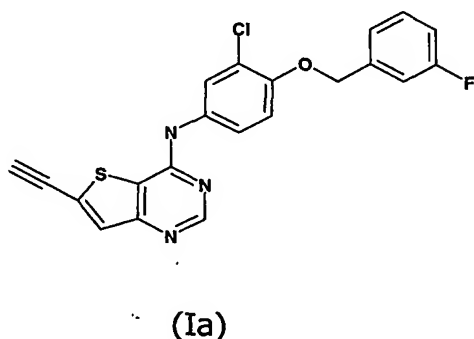
Inhibitor Binding Site

The ATP binding site can be broken down into several regions: hinge, adenine pocket, solvent interface, back pocket and sugar pocket. ATP is modeled into ErbB4 based on the activated IR structure. The hinge region runs from thr796 to pro800 and would be expected to form hydrogen bonds with the adenine base of ATP. The adenine pocket would be formed by the hinge residues on the side and ala749 and leu724 on top and leu850 on the bottom. The back pocket in ErbB4 is an elongated channel that can be divided by 2 regions defined by (1) val732, ala749, lys751, thr796, asp861, and thr860, and (2) met772, val781, leu783, leu794, thr796, and phe862. Typically, potential inhibitors bind in region (1) and do not reach back into region (2). A surface at the solvent interface formed by residues his801, gly802, cys803, glu806, and glu810 could form interactions with inhibitors.

The ribose or sugar pocket is defined by asn848, thr860, cys803, arg847, val732, and gly725.

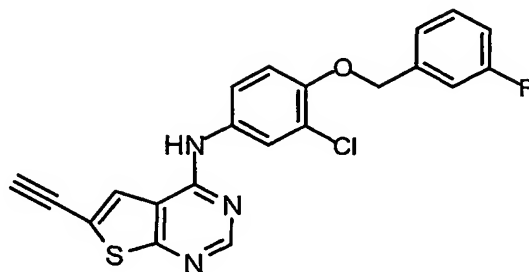
Inhibitor/ErbB4K complex structure

The structure of nonphosphorylated ErbB4 was solved in the presence of a thienopyrimidine inhibitor (formula Ia):



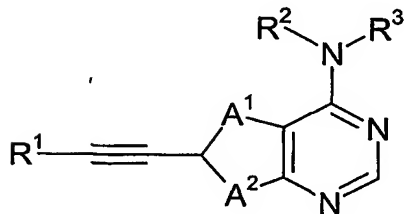
The inhibitor binds in the ATP binding site tunneling into the back of the pocket. The thienopyrimidine group, like the adenosine base of ATP, hydrogen bonds to the hinge region between the N and C-terminal domains (Figure 3). The inhibitor makes a single hydrogen bond to the protein. N1 of the inhibitor hydrogen bonds to the backbone NH of Met799. The thienopyrimidine ring is sandwiched from the top and bottom by the side chains of Ala749 and Leu850, respectively. The side chain of cys803 adds into the alkynyl group forming a cis double bond. The B and C rings of the inhibitor lie deep in the back of the ATP binding site. The B ring packs against the side chains of Val732, Ala749, Lys751, Thr796, and Thr860, while the C ring sits in a hydrophobic pocket formed by Met772, Val781, Leu783, Leu794, Thr796, and Phe862.

Co-crystal structures were also solved using the thienopyrimidine compound of formula (Ib):



(Ib)

Further compounds which may be co-crystallized with the ErbB4 kinase domain include compounds of formula (I):



(I)

wherein:

one of A¹ and A² is S and the other is CH;

R¹ is H or -(CR¹¹R¹¹)_n-R⁵;

R² is H or C₁₋₆alkyl;

R³ is selected from the group consisting of aryl optionally substituted with one or more substituents selected from the group consisting of halo, alkynyl, -CF₃, -(CH₂)_nOR⁴, -(CH₂)_nSR⁴, -NO₂, C₁₋₆alkyl, -CN, -SO₂R⁹, -(CH₂)_naryl and -(CH₂)_nNR⁹R¹⁰, and heteroaryl optionally substituted with one or more

substituents selected from the group consisting of halo, alkynyl, $-\text{CF}_3$, $-(\text{CH}_2)_n\text{OR}^4$, $-(\text{CH}_2)_n\text{SR}^4$, $-\text{NO}_2$, $\text{C}_{1-6}\text{alkyl}$, $-\text{CN}$, $-\text{SO}_2\text{R}^9$, $-(\text{CH}_2)_n\text{aryl}$ and $-(\text{CH}_2)_n\text{NR}^9\text{R}^{10}$;

R^4 is selected from the group consisting of H, $\text{C}_{1-6}\text{alkyl}$, $-(\text{CH}_2)_n\text{NR}^9\text{R}^{10}$, $-(\text{CH}_2)_n\text{heterocyclyl}$, $-(\text{CH}_2)_n\text{aryl}$ in which aryl is optionally substituted with one or more substituents selected from the group consisting of halo, $-\text{CF}_3$, $\text{C}_{1-6}\text{alkoxy}$, $-\text{NO}_2$, $\text{C}_{1-6}\text{alkyl}$, $-\text{CN}$, $-\text{SO}_2\text{R}^9$, and $-(\text{CH}_2)_n\text{NR}^9\text{R}^{10}$, $\text{arylC}_{1-6}\text{alkenylene}$ in which aryl is optionally substituted with one or more substituents selected from the group consisting of halo, $-\text{CF}_3$, $\text{C}_{1-6}\text{alkoxy}$, $-\text{NO}_2$, $\text{C}_{1-6}\text{alkyl}$, $-\text{CN}$, $-\text{SO}_2\text{R}^9$, and $-(\text{CH}_2)_n\text{NR}^9\text{R}^{10}$, $\text{heteroarylC}_{1-6}\text{alkenylene}$ in which heteroaryl is optionally substituted with one or more substituents selected from the group consisting of halo, $-\text{CF}_3$, $\text{C}_{1-6}\text{alkoxy}$, $-\text{NO}_2$, $\text{C}_{1-6}\text{alkyl}$, $-\text{CN}$, $-\text{SO}_2\text{R}^9$, and $-(\text{CH}_2)_n\text{NR}^9\text{R}^{10}$, and $-(\text{CH}_2)_n\text{heteroaryl}$ in which heteroaryl is optionally substituted with one or more substituents selected from the group consisting of halo, $-\text{CF}_3$, $\text{C}_{1-6}\text{alkoxy}$, $-\text{NO}_2$, $\text{C}_{1-6}\text{alkyl}$, $-\text{CN}$, $-\text{SO}_2\text{R}^9$, and $-(\text{CH}_2)_n\text{NR}^9\text{R}^{10}$;

R^5 is selected from the group consisting of heterocyclyl, $-\text{N}(\text{R}^6)-\text{C}(\text{O})-\text{N}(\text{R}^6)(\text{R}^7)$, $-\text{N}(\text{R}^6)-\text{C}(\text{S})-\text{N}(\text{R}^6)(\text{R}^7)$, $-\text{N}(\text{R}^6)-\text{C}(\text{O})-\text{OR}^7$, $-\text{N}(\text{R}^6)-\text{C}(\text{O})-(\text{CH}_2)_n-\text{R}^7$, $-\text{N}(\text{R}^6)-\text{SO}_2\text{R}^6$, $-(\text{CH}_2)_n\text{NR}^6\text{R}^7$, $-(\text{CH}_2)_n\text{OR}^7$, $-(\text{CH}_2)_n\text{SR}^8$, $-(\text{CH}_2)_n\text{S}(\text{O})\text{R}^8$, $-(\text{CH}_2)_n\text{S}(\text{O})_2\text{R}^8$, $-\text{OC}(\text{O})\text{R}^8$, $-\text{OC}(\text{O})\text{OR}^8$, $-\text{C}(\text{O})\text{NR}^6\text{R}^7$, heteroaryl optionally substituted with one or more substituents selected from the group consisting of halo, $-\text{CF}_3$, $\text{C}_{1-6}\text{alkoxy}$, $-\text{NO}_2$, $\text{C}_{1-6}\text{alkyl}$, $-\text{CN}$, $-\text{SO}_2\text{R}^9$, and $-(\text{CH}_2)_n\text{NR}^9\text{R}^{10}$, and aryl optionally substituted with one or more substituents selected from the group consisting of halo, $-\text{CF}_3$, $\text{C}_{1-6}\text{alkoxy}$, $-\text{NO}_2$, $\text{C}_{1-6}\text{alkyl}$, $-\text{CN}$, $-\text{SO}_2\text{R}^9$, and $-(\text{CH}_2)_n\text{NR}^9\text{R}^{10}$;

R^6 and R^7 are independently selected from the group consisting of H, $\text{C}_{1-6}\text{alkyl}$, $\text{C}_{3-8}\text{cycloalkyl}$, heterocyclyl, $-(\text{CH}_2)_n\text{NR}^9\text{R}^{10}$, $-(\text{CH}_2)_n\text{OR}^9$, $-(\text{CH}_2)_n\text{C}(\text{O})\text{R}^8$, $-\text{C}(\text{O})_2\text{R}^8$, $-(\text{CH}_2)_n\text{SR}^8$, $-(\text{CH}_2)_n\text{S}(\text{O})\text{R}^8$, $-(\text{CH}_2)_n\text{S}(\text{O})_2\text{R}^8$, $-(\text{CH}_2)_n\text{R}^8$, $-(\text{CH}_2)_n\text{CN}$, aryl optionally substituted with one or more substituents selected from the group consisting of halo, $-\text{CF}_3$, $\text{C}_{1-6}\text{alkoxy}$, $-\text{NO}_2$, $\text{C}_{1-6}\text{alkyl}$, $-\text{CN}$, $-(\text{CH}_2)_n\text{OR}^8$,

$-(CH_2)_n$ heterocyclyl, $-(CH_2)_n$ heteroaryl, $-SO_2R^9$, and $-(CH_2)_nNR^9R^{10}$, and heteroaryl optionally substituted with one or more substituents selected from the group consisting of halo, $-CF_3$, C_{1-6} alkoxy, $-NO_2$, C_{1-6} alkyl, $-CN$, $-(CH_2)_nOR^8$, $-(CH_2)_n$ heterocyclyl, $-(CH_2)_n$ heteroaryl, $-SO_2R^9$, and $-(CH_2)_nNR^9R^{10}$, or R^6 and R^7 , together with the atom to which they are attached, form a 3-8 membered ring;

R^8 is selected from the group consisting of C_{1-6} alkyl, C_{3-8} cycloalkyl, heterocyclyl C_{1-6} alkylene, aryl C_{1-6} alkylene wherein said aryl is optionally substituted with one or more substituents selected from the group consisting of halo, $-CF_3$, C_{1-6} alkoxy, $-NO_2$, C_{1-6} alkyl, $-CN$, $-SO_2R^9$, and $-(CH_2)_nNR^9R^{10}$, heteroaryl C_{1-6} alkylene wherein said heteroaryl is optionally substituted with one or more substituents selected from the group consisting of halo, $-CF_3$, C_{1-6} alkoxy, $-NO_2$, C_{1-6} alkyl, $-CN$, $-SO_2R^9$, and $-(CH_2)_nNR^9R^{10}$, aryl optionally substituted with one or more substituents selected from the group consisting of halo, $-CF_3$, C_{1-6} alkoxy, $-NO_2$, C_{1-6} alkyl, $-CN$, $-SO_2R^9$, and $-(CH_2)_nNR^9R^{10}$, and heteroaryl optionally substituted with one or more substituents selected from the group consisting of halo, $-CF_3$, C_{1-6} alkoxy, $-NO_2$, C_{1-6} alkyl, $-CN$, $-SO_2R^9$, and $-(CH_2)_nNR^9R^{10}$;

R^9 and R^{10} are independently selected from the group consisting of H, C_{1-6} alkyl, C_{3-8} cycloalkyl, and $-C(O)R^{11}$ or R^9 and R^{10} , together with the atom to which they are attached, form a 3-8 membered ring;

R^{11} is independently selected from the group consisting of H, C_{1-6} alkyl, and C_{3-8} cycloalkyl; and

n is 0-6.

Such thienopyrimidines are described in US Provisional Patent Application Ser. No. 60/342,207 filed December 19, 2001 which was filed December 13, 2002 as PCT Patent Application No. PCT/US02/39872 and

published as WO 03/053446 on July 3, 2003. Such applications are incorporated herein by reference to the extent they disclose and describe such thienopyrimidines as well as the making and use thereof.

As recited above, the present invention provides an ErbB4 kinase domain in liganded crystalline form. Such ErbB4 liganded kinase domain is described by the amino acid sequence of SEQ ID NO: 1 and the structural coordinates of Table 2. SEQ ID NO: 1 is encoded by the DNA sequence of SEQ ID NO: 2. In another embodiment, is an ErbB4 liganded kinase domain described by the amino acid sequence encoded by the DNA sequence of SEQ ID NO: 2 and the structural coordinates of Table 2. In a further embodiment, is a substantially pure and isolated ErbB4 liganded kinase domain described by the amino acid sequence of SEQ ID NO: 1 and the structural coordinates of Table 2. In another embodiment, is a substantially pure and isolated ErbB4 liganded kinase domain described by the amino acid sequence encoded by the DNA sequence of SEQ ID NO: 2 and the structural coordinates of Table 2.

In one embodiment the liganded ErbB4 kinase domain in crystalline form has lattice constants of $a = 63.95 \text{ \AA}$, $b = 63.95 \text{ \AA}$, $c = 163.95 \text{ \AA}$, $\alpha = 90^\circ$, $\beta = 90^\circ$, and $\gamma = 90^\circ$. In one embodiment, the liganded ErbB4 kinase domain in crystalline form has a space group of $P4_3$. In another embodiment, the liganded ErbB4 kinase in crystalline form has an entire NT region which is ordered. In still another embodiment, the liganded ErbB4 kinase in crystalline form has structural coordinates having a deviation from ideal with a RMS of no more than 1.5 \AA except that the activation loop and/or a nucleotide binding loop have structural coordinates having a deviation from ideal with a RMS of no more than 10 \AA . In a further embodiment, the liganded ErbB4 kinase in crystalline form has an activation loop and/or a nucleotide binding loop have structural coordinates having a deviation from ideal with a RMS of no more than 10 \AA .

In another embodiment, there is provided an ErbB4 kinase domain/inhibitor complex which includes an ErbB4 liganded kinase domain described by the amino acid sequence of SEQ ID NO: 1 or 2 and the structural coordinates of Table 2 and a compound capable of at least one of the following interactions with the cFMS kinase domain:

- (i) one or more interactions with amino acid residues of the ErbB4 kinase domain hinge region;
- (ii) one or more interactions with amino acid residues of the ErbB4 kinase domain adenine pocket;
- (iii) one or more interactions with amino acid residues of the ErbB4 kinase sugar pocket;
- (iv) one or more interactions with amino acid residues of the ErbB4 kinase domain back pocket; and
- (v) one or more interactions with amino acid residues of the ErbB4 kinase domain solvent interface;

preferably

- (i) one or more interactions with amino acid residues 796, 797, 798, 799, and 800;
- (ii) one or more interactions with amino acid residues 724, 749, and 850;
- (iii) one or more interactions with amino acid residues 848, 860, 803, 847, 732, and 725;
- (iv) one or more interactions with amino acid residues 732, 749, 751, 796, 861, 860, 772, 781, 783, 794, 796, and 862; and
- (v) one or more interactions with residues 801, 802, 803, 806, and 810.

More preferred embodiments of interactions (i), (ii), (iii), (iv), and (v) are described following.

The amino acid region referred to in the interaction described in (i), which include amino acid residues 796 - 800, is typically referred to as the hinge region. In one embodiment, there are one or more kinase domain/compound bonding interactions with at least one of amino acid residues 796 to 800, preferably at least one of the bonding interactions is a hydrogen bonding interaction. In another embodiment, there are two or more bonding interactions with at least one of amino acid residues 796 to 800, preferably at least one of the bonding interactions is a hydrogen bonding interaction. In a further embodiment, there are three or more bonding interactions with at least one of amino acid residues 796 to 800, preferably at least one of the bonding interactions is a hydrogen bonding interaction. In a still further embodiment, there are four or more bonding interactions with at least one of amino acid residues 796 to 800, preferably at least one of the bonding interactions is a hydrogen bonding interaction.

In a preferred embodiment, there are one or more kinase domain/compound hydrogen bonding interactions with at least one of amino acid residues 796 to 800, alternatively two or more hydrogen bonding interactions with at least one of amino acid residues 796 to 800, in a further alternative embodiment three or more hydrogen bonding interactions with at least one of amino acid residues 796 to 800, and in a still further embodiment four or more bonding interactions with at least one of amino acid residues 796 to 800.

In a more preferred embodiment, there is a kinase domain/compound hydrogen bonding interaction with methionine 799, preferably one hydrogen bonding interaction with the backbone NH of methionine 799. Typically, this

hydrogen bond is at a distance of 2.5 to 3.5, preferably 2.6 to 3.3, more preferably 2.8 to 3.0 Å.

In another embodiment, there is a kinase domain/compound hydrogen bonding interaction with methionine 799 and there are one or more kinase domain/compound bonding interactions with at least one of amino acid residues 796 to 800. In another embodiment, there is a kinase domain/compound hydrogen bonding interaction with methionine 799 and there are two or more bonding interactions with at least one of amino acid residues 796 to 800. In a further embodiment, there is a kinase domain/compound hydrogen bonding interaction with methionine 799 and there are three or more bonding interactions with at least one of amino acid residues 796 to 800. Finally, in a still further embodiment, there is a kinase domain/compound hydrogen bonding interaction with methionine 799 and there are four or more bonding interactions with at least one of amino acid residues 796 to 800. Preferably, the one of the hydrogen bonding interactions with methionine 799 is with the backbone NH of methionine 799. Typically, this hydrogen bond is at a distance of 2.5 to 3.5, preferably 2.6 to 3.3, more preferably 2.8 to 3.0.

The amino acid region referred to in the interaction described in (ii), which includes amino acid residues 749, 724, and 850, is commonly termed the adenine pocket. In one embodiment, there are one or more kinase domain/compound interactions with at least one of amino acid residues 749, 724, and 850, preferably two or more interactions with at least two of amino acid residues 749, 724, and 850, more preferably three or more interactions with at least three of amino acid residues 749, 724, and 850, most preferably four or more bonding interactions with amino acid residues 749, 724, and 850.

In one embodiment, there is a kinase domain/compound hydrophobic interaction with alanine 749, preferably an interaction with the side chain of alanine 749. In another embodiment, there is a kinase domain/compound interaction with leucine 724. In a further embodiment, there is a kinase domain/compound interaction with leucine 850, preferably an interaction with the side chain of leucine 850. In a more preferred embodiment, there is one kinase domain/compound interaction with at least one of alanine 749, leucine 724, and leucine 850. In a most preferred embodiment, there are two kinase domain/compound bonding interactions: (i) an interaction with the side chain of alanine 749 and ii) an interaction with the side chain of leucine 850.

The amino acid region referred to in the interactions described in (iii) describe what is commonly termed the sugar (ribose) pocket and is defined by amino acid residues 848, 860, 803, 847, 732, and 725. In one embodiment, there are one or more kinase domain/compound interactions with at least one of amino acid residues 848, 860, 803, 847, 732, and 725, preferably two or more interactions with amino acid residues 848, 860, 803, 847, 732, and 725.

In one embodiment, there is a kinase domain/compound interaction with asparagine 848. In another embodiment, there is a kinase domain/compound interaction with threonine 860. In another embodiment, there is a kinase domain/compound interaction with cysteine 803, preferably a covalent interaction between cysteine 803 and the compound, more preferably a covalent interaction between cysteine 803 and the alkynyl group of the compound forming a cis double bond. In another embodiment, there is a kinase domain/compound interaction with arginine 847. In another embodiment, there is a kinase domain/compound interaction with valine 732. In another embodiment, there is a kinase domain/compound interaction with glycine 725.

The amino acid region referred to in the interactions in (iv) described what is commonly termed the back pocket, which is formed by residues 732, 749, 751, 796, 861, 860, 772, 781, 783, 794, 796, and 862. In one embodiment, there are one or more kinase domain/compound interactions with at least one of amino acid residues 732, 749, 751, 796, 861, 860, 772, 781, 783, 794, 796, and 862, preferably two or more interactions with at least two of amino acid residues 732, 749, 751, 796, 861, 860, 772, 781, 783, 794, 796, and 862, more preferably three or more interactions with at least three of amino acid residues 732, 749, 751, 796, 861, 860, 772, 781, 783, 794, 796, and 862, still more preferably four or more bonding interactions with at least four of amino acid residues 732, 749, 751, 796, 861, 860, 772, 781, 783, 794, 796, and 862.

In one embodiment, there is a kinase domain/compound interaction with valine 732, preferably a hydrophobic interaction with valine 732. In another embodiment, there is a kinase domain/compound interaction with alanine 749, preferably a hydrophobic bonding interaction with alanine 749. In another embodiment, there is a kinase domain/compound interaction with lysine 751, preferably a hydrophobic interaction with lysine 751. In a further embodiment, there is a kinase domain/compound interaction with threonine 796, preferably a hydrophobic interaction with threonine 796. In another further embodiment, there is a kinase domain/compound hydrophobic interaction with aspartic acid 861, preferably a hydrophobic interaction with aspartic acid 861. In another embodiment, there is a kinase domain/compound interaction with threonine 860, preferably a hydrophobic interaction with threonine 860. In another embodiment, there is a kinase domain/compound interaction with methionine 772, preferably a hydrophobic interaction with methionine 772. In another embodiment, there is a kinase domain/compound interaction with valine 781, preferably a hydrophobic

interaction with valine 781. In another embodiment, there is a kinase domain/compound interaction with leucine 783, preferably a hydrophobic interaction with leucine 783. In another embodiment, there is a kinase domain/compound interaction with leucine 794, preferably a hydrophobic interaction with leucine 794. In another embodiment, there is a kinase domain/compound interaction with threonine 796, preferably a hydrophobic interaction with threonine 796. In another embodiment, there is a kinase domain/compound interaction with phenylalanine 862, preferably a hydrophobic interaction with phenylalanine 862.

The amino acid region referred to in the interactions in (v) describe what is commonly termed the solvent interface, which is formed by residues 801, 802, 803, 806, and 810. In one embodiment, there are one or more kinase domain/compound interactions with at least one of amino acid residues 801, 802, 803, 806, and 810, preferably two or more interactions with at least two of amino acid residues 801, 802, 803, 806, and 810, more preferably three or more interactions with at least two of amino acid residues 801, 802, 803, 806, and 810.

In one embodiment, there is a kinase domain/compound interaction with histidine 801. In another embodiment, there is a kinase domain/compound interaction with glycine 802. In one embodiment, there is a kinase domain/compound interaction with cysteine 803. In another embodiment, there is a kinase domain/compound interactions glutamic acid 806. In a further embodiment, there is a kinase domain/compound interaction with glutamic acid 810.

The method of ErbB4 inhibitor design of the present invention includes as a first step: generating a three dimensional computer model which represents a ErbB4 kinase domain in liganded form, said kinase domain being

described by the amino acid sequence of SEQ ID NO: 1 and having the structural coordinates of Table 2. Typically, such a computer model of SEQ ID NO: 1 and the structural coordinates of Table 2 is constructed utilizing a commercially available software program. Software programs for generating three-dimensional graphical representations of molecules or portions thereof from a set of structural coordinates are well known and used in the art. Suitable examples of such computer programs for viewing or otherwise manipulating protein structures include, but are not limited to, the following: Midas (University of California, San Francisco), MidasPlus (University of California, San Francisco), MOIL (University of Illinois), Yummie (Yale University), Sybyl (Tripos, Inc.), Insight/Discover (Biosym Technologies), MacroModel (Columbia University), Quanta (Molecular Simulations, Inc.), CNS (Molecular Simulations, Inc.), Cerius (Molecular Simulations, Inc.), Alchemy (Tripos, Inc.), LabVision (Tripos, Inc.), Rasmol (Glaxo Research and Development), Ribbon (University of Alabama), NAOMI (Oxford University), Explorer Eyechem (Silicon Graphics, Inc.), Univision (Cray Research), Molscrip (Uppsala University), Chem-3D (Cambridge Scientific), Chain (Baylor College of Medicine), O (Uppsala University), GRASP (Columbia University), X-Plor (Molecular Simulations, Inc., Yale University), Spartan (Wavefunction, Inc.), Catalyst (Molecular Simulations, Inc.), Molcadd (Tripos, Inc.), VMD (University of Illinois/Beckman Institute), Sculpt (Interactive Simulations, Inc.), Procheck (Brookhaven National Laboratory), DGEOM (QCPE), RE_VIEW (Brunel University), Modeller (Birkbeck College, University of London), Xmol (Minnesota Supercomputing Center), Protein Expert (Cambridge Scientific), HyperChem (Hypercube), MD Display (University of Washington), PKB (National Center for Biotechnology Information, NIH), ChemX (Chemical Design, Ltd.), Cameleon (Oxford Molecular, Inc.), and Iditis (Oxford Molecular, Inc.).

Once the three dimensional model of the ErbB4 kinase domain is established candidate inhibitor compounds may be evaluated utilizing the model and the selected software application. Initially, it is understood that the term "evaluate" includes within its scope, without limitation, de novo inhibitor molecular design, computer-aided optimization of known candidate inhibitors, as well as computer-based selection of candidate inhibitors. Various computational analysis methods are known in the art for the evaluation of potential binding interactions between a polypeptide binding pocket and a candidate inhibitor molecule. Such methods typically utilize at least one of the software packages recited above and are known in the art. Computational and other evaluation methods are described for instance in U.S. Patents 6,251,620 and 6,356,845, such patents being incorporated herein by reference to the extent that they disclose computational and other evaluation methods for drug design, selection and/or optimization.

Examples of protein-inhibitor interactions which are screened for include potential covalent, electrostatic, hydrophobic, hydrophilic, van der Waals, and hydrogen bonding between the ErbB4 kinase molecule and candidate inhibitors as well as favorable candidate inhibitor conformations within the ErbB4 kinase binding pocket.

In one embodiment, evaluation of compounds as potential ErbB4 inhibitors using said model comprises identifying compounds capable of at least one of the following ErbB4 kinase domain/compound interactions:

- (i) one or more interactions with amino acid residues of the ErbB4 kinase domain hinge region;
- (ii) one or more interactions with amino acid residues of the ErbB4 kinase domain adenine pocket,
- (iii) one or more interactions with amino acid residues of the ErbB4 kinase sugar pocket and phosphate region,

(iv) one or more interactions with amino acid residues of the ErbB4 kinase domain back pocket, and

(vi) one or more interactions with amino acid residues of the ErbB4 kinase domain solvent interface;
preferably

(i) one or more interactions with amino acid residues 796, 797, 798, 799, and 800;

(iii) one or more interactions with amino acid residues 724, 749, and 850;

(iii) one or more interactions with amino acid residues 848, 860, 803, 847, 732, and 725;

(iv) one or more interactions with amino acid residues 732, 749, 751, 796, 861, 860, 772, 781, 783, 794, 796, and 862; and

(v) one or more interactions with residues 801, 802, 803, 806, and 810.

Further preferred embodiments of the interactions (i), (ii), (iii), (iv), and (v) are as described above.

If evaluation indicates that a compound shows promise as a candidate inhibitor the compounds are selected for further testing based on said evaluation. An inhibitor candidate is generally sought which can exist in a conformation, which appears to be structurally compatible with at least a part of the ErbB4 kinase domain binding pocket. Such conformation will be sterically and energetically compatible with the ErbB4 kinase domain. Typically, the above listed non-covalent or secondary bonding interactions will be important in the interaction of the candidate inhibitor and the ErbB4 kinase domain. In addition, other conformational factors include the overall three dimensional structure and orientation of the candidate inhibitor within the protein structure, especially the binding pocket as well as spacial and

energetic relationships of the various functional groups of the candidate inhibitor and ErbB4 kinase domain which have potential for interaction. The further testing done typically is to evaluate the inhibitory effect on the kinase activity of ErbB4 and may take the form of enzyme or cell based assays as well as other assays known in the art for measuring the inhibitory effect on the kinase activity of ErbB4.

The present invention also provides a method of inhibiting ErbB4 in a mammal, which includes administering to said mammal a therapeutically effective amount of a compound that can form a complex with a ErbB4 kinase domain thereby resulting in a ErbB4 kinase domain in liganded form. Also provided is a method of treating a disorder characterized by inappropriate ErbB4 activity in a mammal which includes administering to said mammal a therapeutically effective amount of a compound that can form a complex with a ErbB4 kinase domain thereby resulting in a ErbB4 kinase domain in liganded form.

Compounds useful in the treatment methods of the present invention include those having interactions (i), (ii), (iii), (iv), and (v) with the ErbB4 kinase domain. Such interactions are as described above.

The inappropriate ErbB4 activity referred to herein is any ErbB4 activity that deviates from the normal ErbB4 activity expected in a particular mammalian subject. Inappropriate ErbB4 activity may take the form of, for instance, an abnormal increase in activity, or an aberration in the timing and or control of ErbB4 activity. Such inappropriate activity may result then, for example, from overexpression or mutation of the protein kinase leading to inappropriate or uncontrolled activation. Furthermore, it is also understood that unwanted ErbB4 activity may reside in an abnormal source, such as a malignancy. That is, the level of ErbB4 activity does not have to be abnormal

to be considered inappropriate, rather the activity derives from an abnormal source.

While it is possible that, for use in therapy, therapeutically effective amounts of the compounds described in the present invention, as well as salts, solvates and physiologically functional derivatives thereof, may be administered as the raw chemical, it is possible to present the active ingredient as a pharmaceutical composition. Accordingly, the invention further provides pharmaceutical compositions, which include therapeutically effective amounts of the compound described herein and salts, solvates and physiological functional derivatives thereof, and one or more pharmaceutically acceptable carriers, diluents, or excipients. The compounds of the formula (I) and salts, solvates and physiological functional derivatives thereof, are as described above. The carrier(s), diluent(s) or excipient(s) must be acceptable in the sense of being compatible with the other ingredients of the formulation and not deleterious to the recipient thereof. In accordance with another aspect of the invention there is also provided a process for the preparation of a pharmaceutical formulation including admixing a compound of the present invention or salts, solvates and physiological functional derivatives thereof, with one or more pharmaceutically acceptable carriers, diluents or excipients.

Pharmaceutical formulations may be presented in unit dose forms containing a predetermined amount of active ingredient per unit dose. Such a unit may contain, for example, 0.5mg to 1g, preferably 1mg to 700mg, more preferably 5mg to 100mg of a compound of the present invention, depending on the condition being treated, the route of administration and the age, weight and condition of the patient, or pharmaceutical formulations may be presented in unit dose forms containing a predetermined amount of active ingredient per unit dose. Preferred unit dosage formulations are those containing a daily dose or sub-dose, as herein above recited, or an

appropriate fraction thereof, of an active ingredient. Furthermore, such pharmaceutical formulations may be prepared by any of the methods well known in the pharmacy art.

Pharmaceutical formulations may be adapted for administration by any appropriate route, for example by the oral (including buccal or sublingual), rectal, nasal, topical (including buccal, sublingual or transdermal), vaginal or parenteral (including subcutaneous, intramuscular, intravenous or intradermal) route. Such formulations may be prepared by any method known in the art of pharmacy, for example by bringing into association the active ingredient with the carrier(s) or excipient(s).

Pharmaceutical formulations adapted for oral administration may be presented as discrete units such as capsules or tablets; powders or granules; solutions or suspensions in aqueous or non-aqueous liquids; edible foams or whips; or oil-in-water liquid emulsions or water-in-oil liquid emulsions.

For instance, for oral administration in the form of a tablet or capsule, the active drug component can be combined with an oral, non-toxic pharmaceutically acceptable inert carrier such as ethanol, glycerol, water and the like. Powders are prepared by comminuting the compound to a suitable fine size and mixing with a similarly comminuted pharmaceutical carrier such as an edible carbohydrate, as, for example, starch or mannitol. Flavoring, preservative, dispersing and coloring agent can also be present.

Capsules are made by preparing a powder mixture, as described above, and filling formed gelatin sheaths. Glidants and lubricants such as colloidal silica, talc, magnesium stearate, calcium stearate or solid polyethylene glycol can be added to the powder mixture before the filling operation. A disintegrating or solubilizing agent such as agar-agar, calcium

carbonate or sodium carbonate can also be added to improve the availability of the medicament when the capsule is ingested.

Moreover, when desired or necessary, suitable binders, lubricants, disintegrating agents and coloring agents can also be incorporated into the mixture. Suitable binders include starch, gelatin, natural sugars such as glucose or beta-lactose, corn sweeteners, natural and synthetic gums such as acacia, tragacanth or sodium alginate, carboxymethylcellulose, polyethylene glycol, waxes and the like. Lubricants used in these dosage forms include sodium oleate, sodium stearate, magnesium stearate, sodium benzoate, sodium acetate, sodium chloride and the like. Disintegrators include, without limitation, starch, methyl cellulose, agar, bentonite, xanthan gum and the like. Tablets are formulated, for example, by preparing a powder mixture, granulating or slugging, adding a lubricant and disintegrant and pressing into tablets. A powder mixture is prepared by mixing the compound, suitably comminuted, with a diluent or base as described above, and optionally, with a binder such as carboxymethylcellulose, an aliginat, gelatin, or polyvinyl pyrrolidone, a solution retardant such as paraffin, a resorption accelerator such as a quaternary salt and/or an absorption agent such as bentonite, kaolin or dicalcium phosphate. The powder mixture can be granulated by wetting with a binder such as syrup, starch paste, acadia mucilage or solutions of cellulosic or polymeric materials and forcing through a screen. As an alternative to granulating, the powder mixture can be run through the tablet machine and the result is imperfectly formed slugs broken into granules. The granules can be lubricated to prevent sticking to the tablet forming dies by means of the addition of stearic acid, a stearate salt, talc or mineral oil. The lubricated mixture is then compressed into tablets. The compounds of the present invention can also be combined with a free flowing inert carrier and compressed into tablets directly without going through the granulating or slugging steps. A clear or opaque protective coating consisting

of a sealing coat of shellac, a coating of sugar or polymeric material and a polish coating of wax can be provided. Dyestuffs can be added to these coatings to distinguish different unit dosages.

Oral fluids such as solution, syrups and elixirs can be prepared in dosage unit form so that a given quantity contains a predetermined amount of the compound. Syrups can be prepared by dissolving the compound in a suitably flavored aqueous solution, while elixirs are prepared through the use of a non-toxic alcoholic vehicle. Suspensions can be formulated by dispersing the compound in a non-toxic vehicle. Solubilizers and emulsifiers such as ethoxylated isostearyl alcohols and polyoxy ethylene sorbitol ethers, preservatives, flavor additive such as peppermint oil or natural sweeteners or saccharin or other artificial sweeteners, and the like can also be added.

Where appropriate, dosage unit formulations for oral administration can be microencapsulated. The formulation can also be prepared to prolong or sustain the release as for example by coating or embedding particulate material in polymers, wax or the like.

The compounds of the present invention, and salts, solvates and physiological functional derivatives thereof, can also be administered in the form of liposome delivery systems, such as small unilamellar vesicles, large unilamellar vesicles and multilamellar vesicles. Liposomes can be formed from a variety of phospholipids, such as cholesterol, stearylamine or phosphatidylcholines.

The compounds of the present invention and salts, solvates and physiological functional derivatives thereof may also be delivered by the use of monoclonal antibodies as individual carriers to which the compound molecules are coupled. The compounds may also be coupled with soluble

polymers as targetable drug carriers. Such polymers can include polyvinylpyrrolidone, pyran copolymer, polyhydroxypropylmethacrylamide - phenol, polyhydroxyethylaspartamidephenol, or polyethyleneoxidepolylysine substituted with palmitoyl residues. Furthermore, the compounds may be coupled to a class of biodegradable polymers useful in achieving controlled release of a drug, for example, polylactic acid, polyepsilon caprolactone, polyhydroxy butyric acid, polyorthoesters, polyacetals, polydihydropyrans, polycyanoacrylates and cross-linked or amphipathic block copolymers of hydrogels.

Pharmaceutical formulations adapted for transdermal administration may be presented as discrete patches intended to remain in intimate contact with the epidermis of the recipient for a prolonged period of time. For example, the active ingredient may be delivered from the patch by iontophoresis as generally described in *Pharmaceutical Research*, 3(6), 318 (1986).

Pharmaceutical formulations adapted for topical administration may be formulated as ointments, creams, suspensions, lotions, powders, solutions, pastes, gels, sprays, aerosols or oils.

For treatments of the eye or other external tissues, for example mouth and skin, the formulations are preferably applied as a topical ointment or cream. When formulated in an ointment, the active ingredient may be employed with either a paraffinic or a water-miscible ointment base. Alternatively, the active ingredient may be formulated in a cream with an oil-in-water cream base or a water-in-oil base.

Pharmaceutical formulations adapted for topical administrations to the eye include eye drops wherein the active ingredient is dissolved or suspended in a suitable carrier, especially an aqueous solvent.

Pharmaceutical formulations adapted for topical administration in the mouth include lozenges, pastilles and mouth washes.

Pharmaceutical formulations adapted for rectal administration may be presented as suppositories or as enemas.

Pharmaceutical formulations adapted for nasal administration wherein the carrier is a solid include a coarse powder having a particle size for example in the range 20 to 500 microns which is administered in the manner in which snuff is taken, i.e. by rapid inhalation through the nasal passage from a container of the powder held close up to the nose. Suitable formulations wherein the carrier is a liquid, for administration as a nasal spray or as nasal drops, include aqueous or oil solutions of the active ingredient.

Pharmaceutical formulations adapted for administration by inhalation include fine particle dusts or mists, which may be generated by means of various types of metered, dose pressurised aerosols, nebulizers or insufflators.

Pharmaceutical formulations adapted for vaginal administration may be presented as pessaries, tampons, creams, gels, pastes, foams or spray formulations.

Pharmaceutical formulations adapted for parenteral administration include aqueous and non-aqueous sterile injection solutions which may contain anti-oxidants, buffers, bacteriostats and solutes which render the

formulation isotonic with the blood of the intended recipient; and aqueous and non-aqueous sterile suspensions which may include suspending agents and thickening agents. The formulations may be presented in unit-dose or multi-dose containers, for example sealed ampoules and vials, and may be stored in a freeze-dried (lyophilized) condition requiring only the addition of the sterile liquid carrier, for example water for injections, immediately prior to use. Extemporaneous injection solutions and suspensions may be prepared from sterile powders, granules and tablets.

It should be understood that in addition to the ingredients particularly mentioned above, the formulations may include other agents conventional in the art having regard to the type of formulation in question, for example those suitable for oral administration may include flavouring agents.

A therapeutically effective amount of a compound of the present invention will depend upon a number of factors including, for example, the age and weight of the animal, the precise condition requiring treatment and its severity, the nature of the formulation, and the route of administration, and will ultimately be at the discretion of the attendant physician or veterinarian. However, an effective amount of a compound of the present invention for the treatment of neoplastic growth, for example colon or breast carcinoma, will generally be in the range of 0.1 to 100 mg/kg body weight of recipient (mammal) per day and more usually in the range of 1 to 10 mg/kg body weight per day. Thus, for a 70kg adult mammal, the actual amount per day would usually be from 70 to 700 mg and this amount may be given in a single dose per day or more usually in a number (such as two, three, four, five or six) of sub-doses per day such that the total daily dose is the same. An effective amount of a salt or solvate, or physiologically functional derivative thereof, may be determined as a proportion of the effective amount of the compound of the present invention *per se*. It is envisaged that similar

dosages would be appropriate for treatment of the other conditions referred to above.

EXAMPLES

As used herein the symbols and conventions used in these processes, schemes and examples are consistent with those used in the contemporary scientific literature, for example, the *Journal of the American Chemical Society* or the *Journal of Biological Chemistry*. Standard single-letter or three-letter abbreviations are generally used to designate amino acid residues, which are assumed to be in the L-configuration unless otherwise noted. Unless otherwise noted, all starting materials were obtained from commercial suppliers and used without further purification.

Structure determination

Modeling and limited proteolysis of the entire intracellular domain of ErbB4 were used to define a construct suitable for structural studies (residues 690-999). A 6x-His tag was added at the N-terminus to aid in the purification. The construct was expressed in baculovirus-infected insect cells and purified by standard chromatographic procedures. Crystallization screens were performed using nonphosphorylated protein complexed with an irreversible inhibitor (Figure 1). Crystals were obtained in the tetragonal space group $P4_3$ with two molecules in the asymmetric unit.

The structure was solved by molecular replacement using the structure of the FGFR1 as a search model [molecule 1 of PDB entry 1FGK]. The structure was refined to an R-factor of 21% at 2.5 Å resolution (Table 1). 8 residues at the N-terminus, 7 residues at the C-terminus and 6 residues within a surface exposed loop (residues 754-761) were disordered and could not be modeled. The structure of the two molecules in the asymmetric unit was essentially identical with a $C\alpha$ rmsd of 0.20 Å.

Certain embodiments of the present invention will now be illustrated by way of example only.

Materials and Methods

Construct generation

A combination of limited proteolysis and modeling was used to define the construct for structural studies. First, the cytoplasmic domain of ErbB4 (residues 690-1309) was ligated in frame behind a 6xHis tag (MKKGHHHHHHG) in a pFastBac1 vector (Invitrogen). The cloned sequence was identical to that reported in GENBANK (L07868).

Limited proteolysis was performed on purified protein from the 6xHis-EphB4_690-1309 construct to define a smaller catalytic domain (see below for more details). Proteolysis suggested that both the C-terminus could be truncated. Therefore, a second construct was generated corresponding to residues 690-999 fused to a 6x his tag (MKKGHHHHHHG). The His-tagged kinase domain was cloned by PCR from the pFastBac1-His-EphB4_690-1309 construct and ligated into a pFastBac1 vector (Invitrogen).

Both constructs were transfected into *Spodoptera frugiperda* (*sf-9*) cells, single plaques were isolated, and high titer stocks were generated. The proteins were expressed and purified as described below.

Limited proteolysis

Purified 6xHis-ErbB4_690-1309 was digested with a panel of 8 proteases in a 96 well plate. 5 ug of 6xHis-ErbB4 (5 uL at 1 mg/mL) was added to 5 uL of 10 mg/mL protease in 20 uL of reaction buffer (50 mM Tris-HCl, pH 8.0, 100 mM NaCl). Reactions were stopped at 0.75, 2, and 18 hours

with 10 μ L of 4x SDS-PAGE sample buffer. All digests were analyzed by SDS-PAGE (NuPAGE Novex 10% Bis-Tris gel, MES running buffer). Bands of interest were electroblotted on PVDF membrane and subjected to Edman sequencing.

<u>Proteases used</u>	<u>Source</u> (Boehringer Mannheim unless otherwise noted)
1.) Trypsin	catalogue # 1418475
2.) Chymotrypsin	catalogue # 1418467
3.) Lys C	catalogue # 1047825
4.) Glu C	catalogue # 1047817
5.) Asp N	catalogue # 1054589
6.) Arg C	catalogue # 1370529
7.) Thermolysin	catalogue # 161586
8.) Subtilisin	catalogue # 572908 (Calbiochem)

Protein Fermentation/Purification

Fermentation: Large-scale (2L) virus preparations for fermentation were made by infecting *Sf-9* cells growing in Grace's Supplemented medium (GIBCO/Life Technologies) + 0.1% capluronic® F-68 (GIBCO/Life Technologies) + 10% FBS (HyClone Laboratories) at a multiplicity of infection (MOI) of 0.1 in 6L shake flasks at 27.5°C and 120 RPM. Viral supernatants were harvested at 72 hours post-infection via centrifugation at 2500 RPM for 20 minutes. Viral titers were determined via ELISA. A 36L stirred bioreactor (University Research Glassware) was outfitted with external overhead stirrer & water bath and internal dip tubes, heat-transfer coil, paddle-style impeller and dO₂ probe. The bioreactor was inoculated with *Trichoplusia ni* (*T. ni*) cells [kindly obtained from JRH BioSciences (Woodland, CA)] at $\sim 0.5 \times 10^6$ /mL. The culture was grown in Ex-Cell™ 405 insect cell medium (JRH BioSciences). Temperature was maintained at 27.5°C using an external water

bath and an internal temperature probe & heat-transfer coil. Agitation was maintained at 30 RPM using an external overhead drive and an internal paddle-type impeller. Dissolved oxygen was maintained at 50% via sparging under the control of an internal dO₂ probe. Cells were allowed to double overnight at the above parameters, and the culture was then infected at a density of $\sim 1 \times 10^6$ /mL at MOI = 1. The culture was monitored daily for pH, glucose, lactate and glutamine levels as well as cell count and viability via trypan blue exclusion. Infection was allowed to proceed at the above parameters, and cells were harvested at 48 hours post-infection using a Centritech® 100 continuous flow centrifuge (DuPont). Concentrated cells were subsequently centrifuged at 2000 RPM for 20 minutes and washed with protease inhibitor buffer [1X Dulbecco's PBS (GIBCO/Life Technologies), 1 mM EDTA (Sigma), 1 mM p-aminobenzamidine (Sigma), 1 µg/mL aprotinin (Boehringer Mannheim), 1µg/mL leupeptin (Boehringer Mannheim)]. Cells were centrifuged again at 2000 RPM for 20 minutes. The supernatant was decanted, and the cells were flash frozen in a dry ice/ethanol bath and stored at -80°C until further purification.

Purification:

All operations were carried out at 4°C. Insect cells were resuspended and thawed in buffer A (25 mM HEPES pH 7.5, 750 mM NaCl, 10% glycerol, 25 mM imidazole) supplemented with a protease inhibitor cocktail (Sigma), 1mM MgCl₂ and 5µg/ml of DNase I and RNase. The cells were lysed with a Polytron homogenizer (Brinkmann) and then centrifuged for 1 hour at 30,000 g (14,000 rpm) in a Sorvall SLA 1500 rotor. The pelleted material was discarded, and the supernatant was filtered through a 4.5µ filter (PALL Corp.). The lysate was directly loaded onto a Ni-Chelating Sepharose FF column (Amersham Pharmacia). Before sample loading, the column was equilibrated with 5 column volumes (CV's) of buffer A. After sample loading, the column was washed for 5 CV's with buffer A. The protein was eluted with a 20 CV

linear gradient from 50 to 500 mM imidazole in buffer A. Fractions containing ErbB4K protein were analyzed by polyacrylamide gel electrophoresis and pooled. The pool was diluted 8 fold in Buffer B (20 mM HEPES, 20 mM NaH_2PO_4 , pH 6.8, 10% glycerol) and loaded onto Ceramic HA (Bio-Rad) column previously equilibrated in buffer B. Active ErbB4 flows through and does not bind. The flow-through fraction was brought to 0.6M $(\text{NH}_4)_2\text{SO}_4$ by addition of a 2.5M $(\text{NH}_4)_2\text{SO}_4$ stock solution and the sample applied to a Phenyl HIC column previously equilibrated in buffer E (20 mM Tris-HCl, pH 7.5, 0.6M $(\text{NH}_4)_2\text{SO}_4$). A reverse linear gradient to 100% buffer F (20 mM Tris-HCl, pH 7.5, 10% glycerol) was used to elute protein. Fractions containing pure ErbB4 were pooled, aliquoted and stored at -80°C .

Preparation of Inhibitor Candidate Compounds

As used herein the symbols and conventions used in these processes, schemes and examples are consistent with those used in the contemporary scientific literature, for example, the *Journal of the American Chemical Society* or the *Journal of Biological Chemistry*. Standard single-letter or three-letter abbreviations are generally used to designate amino acid residues, which are assumed to be in the L-configuration unless otherwise noted. Unless otherwise noted, all starting materials were obtained from commercial suppliers and used without further purification. Specifically, the following abbreviations may be used in the examples and throughout the specification:

g (grams);	mg (milligrams);
L (liters);	mL (milliliters);
μL (microliters);	psi (pounds per square inch);
M (molar);	mM (millimolar);
mol (moles);	mmol (millimoles);

All references to ether are to diethyl ether; brine refers to a saturated aqueous solution of NaCl. Unless otherwise indicated, all temperatures are

expressed in °C (degrees Centigrade). All reactions are conducted under an inert atmosphere at room temperature unless otherwise noted.

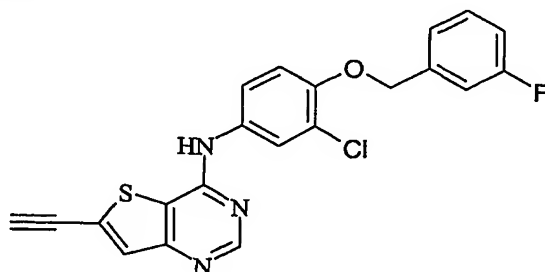
¹H NMR spectra were recorded on a Varian VXR-300, a Varian Unity-300, a Varian Unity-400 instrument, a Bruker AVANCE-400, or a General Electric QE-300. Chemical shifts are expressed in parts per million (ppm, δ units). Coupling constants are in units of hertz (Hz). Splitting patterns describe apparent multiplicities and are designated as s (singlet), d (doublet), t (triplet), q (quartet), quint (quintet), m (multiplet), br (broad).

HPLC were recorded on a Gilson HPLC or Shimazu HPLC system by the following conditions. Column: 50 X 4.6mm (id) stainless steel packed with 5 μ m Phenomenex Luna C-18 ; Flow rate: 2.0 mL/min; Mobile phase: A phase = 50mM ammonium acetate (pH 7.4), B phase = acetonitrile, 0-0.5min (A: 100%, B: 0%), 0.5-3.0 min (A:100-0%, B:0-100%), 3.0-3.5min (A: 0%, B: 100%), 3.5-3.7 min (A: 0-100%, B: 100-0%), 3.7-4.5 min (A: 100%, B: 0%); Detection : UV 254nm; Injection volume: 3 μ L .

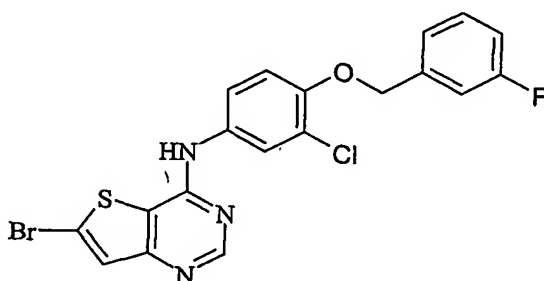
Low-resolution mass spectra (MS) were recorded on a JOEL JMS-AX505HA, JOEL SX-102, or a SCIEX-APIiii spectrometer; LC-MS were recorded on a micromass 2MD and Waters 2690; high resolution MS were obtained using a JOEL SX-102A spectrometer. All mass spectra were taken under electrospray ionization (ESI), chemical ionization (CI), electron impact (EI) or by fast atom bombardment (FAB) methods. Infrared (IR) spectra were obtained on a Nicolet 510 FT-IR spectrometer using a 1-mm NaCl cell. Most of the reactions were monitored by thin-layer chromatography on 0.25 mm E. Merck silica gel plates (60F-254), visualized with UV light, 5% ethanolic phosphomolybdic acid or p-anisaldehyde solution. Flash column chromatography was performed on silica gel (230-400 mesh, Merck).

Compounds of Formula I(a) and I(b) can be prepared according to the

synthetic sequence detailed in the Examples section following.

Example 1***N*-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}-6-ethynylthieno[3,2-*d*]pyrimidin-4-amine*****Step A***

Preparation of 6-Bromo-N-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}thieno[3,2-*d*]pyrimidin-4-amine hydrochloride

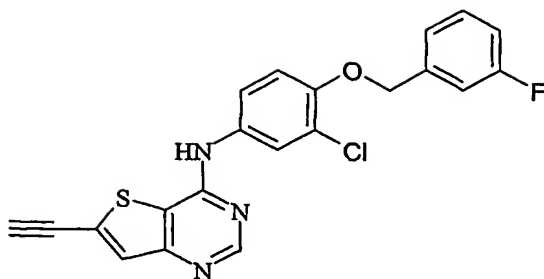


6-Bromo-4-chlorothieno[3,2-*d*]pyrimidine (2) (1.05 g, 4 mmol) and 3-chloro-4-[(3-fluorobenzyl)oxy]aniline (986 mg, 3.9 mmol) were heated at 60 °C for 3 h in isopropanol (30 mL). The mixture was concentrated and the resulting material was triturated with ethyl ether and collected by suction filtration to yield the product (1.7 g) as a white solid.

Step B

Preparation of N-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}-6-ethynylthieno[3,2-*d*]pyrimidin-4-amine

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6-Bromo-*N*-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}thieno[3,2-*d*]pyrimidin-4-amine hydrochloride (1.0 g, 2.0 mmol) was combined with CuI (45 mg, 0.24 mmol), dichlorobis(triphenylphosphine)palladium(II) (57 mg, 0.08 mmol), THF (14 mL), triethylamine (0.74 mL, 5.3 mmol), and trimethylsilylacetylene (0.37 mL, 2.62 mmol). The mixture stirred at room temperature for 6 h, concentrated and purified by silica gel chromatography (eluting with 3:1 to 2:1 hexane/ethyl acetate). The resulting silyl acetylene intermediate (618 mg) was dissolved in THF (17 mL) and cooled to 0 °C. A 1.0 M solution of TBAF in THF (1.4 mL, 1.4 mmol) was added and the mixture was stirred 1 h. The reaction was partitioned between ethyl acetate and water, the organic layer was separated and dried (Na₂SO₄) filtered and concentrated. The resulting solid was purified by silica gel chromatography (eluting with 7:3 to 6:4 hexane/ethyl acetate) to give the title compound (400 mg) as an orange solid. ESI MS (positive ion): (M-H) 410.2

¹H NMR (300 MHz, DMSO) δ 5.03 (s, 1H), 5.25 (s, 2H), 7.14-7.21 (m, 1H), 7.23-7.22 (m, 3H), 7.43-7.50 (d, 1H), 7.61 (dd, J=8.9, 2.6Hz, 1H), 7.71 (s, 1H), 7.92 (d, J=2.5Hz, 1H), 8.59 (s, 1H), 9.78 (s, 1H).

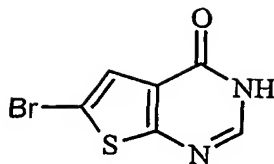
Example 2

***N*-{3-Chloro-4-[(3-fluorobenzyl)oxy]phenyl}-6-ethynylthieno[2,3-*d*]pyrimidin-4-amine**

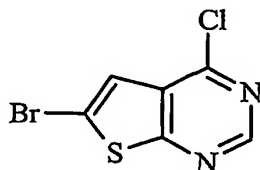
Step A

*Preparation of 6-bromothieno[2,3-*d*]pyrimidin-4(3H)-one*

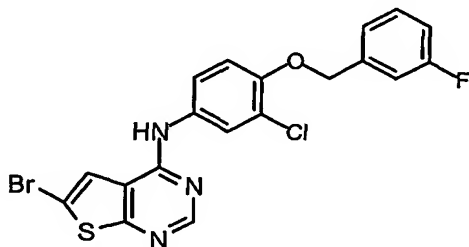
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To a slurry of commercially available thieno[2,3-*d*]pyrimidin-4(3*H*)-one (1.5 g, 9.86 mmol) in glacial acetic acid (26 mL) was added dropwise bromine (1.0 mL, 20 mmol). The dark brown mixture was heated at 80 °C for 1.5 h. The mixture was allowed to cool to ambient temperature and was poured onto a mixture of saturated aqueous NaHCO₃ and ice. The resulting solid was collected by suction filtration, washed with water and dried in vacuo to afford 2.09 g of the title compound. ¹H NMR (400 MHz, DMSO-*d*₆) δ 7.54 (s, 1H), 8.13 (d, 2H, *J* = 3.7 Hz), 12.6 (bs, 1H).

*Step B**Preparation of 6-Bromo-4-chlorothieno[2,3-d]pyrimidine*

6-Bromothieno[2,3-d]pyrimidin-4(3H)-one (2.09 g, 9.05 mmol) was covered with phosphorous oxychloride (4.0 mL, 42.9 mmol) and the mixture was heated at 118-120 °C for 2 h. The mixture was allowed to cool to ambient temperature and was poured onto a mixture of saturated aqueous NaHCO₃ and ice. The resulting precipitate was collected by suction filtration and washed with water. The resulting solid was dried in vacuo to afford 2.07 g of the title compound. ¹H NMR (400 MHz, DMSO-d₆) δ 7.88 (s, 1H), 8.93 (s, 1H).

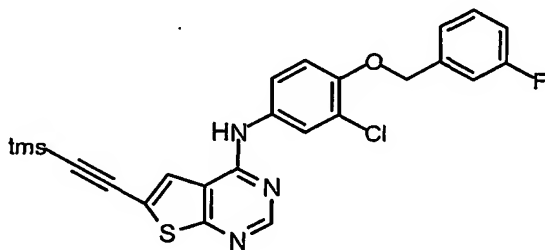
*Step C**Preparation of 6-Bromo-N-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}thieno[2,3-d]pyrimidin-4-amine*

A mixture of 6-bromo-4-chlorothieno[2,3-d]pyrimidine (2.07 g, 8.29 mmol), 3-chloro-4-[(3-fluorobenzyl)oxy]aniline (2.09 g, 8.29 mmol),

triethylamine (2.31 mL, 16.57 mmol) and isopropanol (40 mL) was heated at 85 °C for 16 h. The mixture was allowed to cool to ambient temperature and concentrated to leave a brown residue. The mixture was triturated with ether to afford the title compound (3.34 g) as a tan solid. ¹H NMR (400 MHz, DMSO-d₆) δ 5.24 (s, 2H), 7.18 (m, 1H), 7.26 (d, 1H, J = 9.1 Hz), 7.32 (m, 1H), 7.64 (dd, 1H, J = 12.1, 2.7 Hz), 8.00 (d, 1H, J = 2.5 Hz), 8.02 (s, 1H), 8.48 (s, 1H), 9.63 (s, 1H).

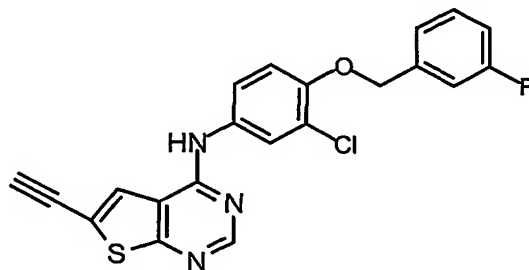
Step D

Preparation of N-{3-Chloro-4-[(3-fluorobenzyl)oxy]phenyl}-6-[(trimethylsilyl)ethynyl]-4,4a-dihydrothieno[2,3-d]pyrimidin-4-amine



An N₂-flushed flask was charged with 6-bromo-*N*-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}thieno[2,3-*d*]pyrimidin-4-amine (1.0 g, 2.15 mmol), Cu(I)I (46 mg, 0.24 mmol), dichlorobis(triphenylphosphino)palladium(II) (57 mg, 0.081 mmol), anhydrous THF (13.5 mL), triethylamine (600 μL, 4.3 mmol) and trimethylsilyl acetylene (370 μL, 2.62 mmol) and the resulting mixture was heated at 40 °C for 5 h. The mixture was concentrated with a rotary evaporator and the residue was purified by flash silica gel chromatography (eluting with 5:1 hexanes/ethyl acetate) to afford 623.4 mg of the title compound as a yellow solid. ¹H NMR (400 MHz, DMSO-d₆) δ 0.25 (s, 9H), 5.22 (s, 2H), 7.16 (dt, 1H, J = 8.9, 2.5 Hz), 7.24 (d, 1H, J = 9.0), 7.29 (m, 1H), 7.43 (m, 1H), 7.62 (dd, 1H, J = 8.9, 2.5 Hz), 8.01 (d, 1H, J = 2.8 Hz), 8.09 (s, 1H), 8.52 (s, 1H), 9.63 (s, 1H).

Step E
Preparation of N-{3-Chloro-4-[(3-fluorobenzyl)oxy]phenyl}-6-ethynylthieno[2,3-d]pyrimidin-4-amine



To a 0 °C solution of *N*-{3-chloro-4-[(3-fluorobenzyl)oxy]phenyl}-6-[(trimethylsilyl)ethynyl]-4,4a-dihydrothieno[2,3-*d*]pyrimidin-4-amine (623.4 mg, 1.29 mmol) in anhydrous THF (17 mL) was added 1.0 M TBAF in THF (1.41 mL, 1.41 mmol). The mixture was stirred at 0 °C for 30 min, then partitioned between ethyl acetate and water. The organic layer was separated, dried over Na₂SO₄, filtered and concentrated to give a residue that was purified by silica gel chromatography (eluting with 5:1 hexanes/ethyl acetate) to give 519.3 mg of the title compound as a pale yellow solid, mp 197 °C. ¹H NMR (400 MHz, DMSO-*d*₆) δ 4.89 (s, 1H), 5.27 (s, 2H), 7.21 (t, 1H, *J* = 9.2 Hz), 7.31 (d, 1H, *J* = 9.2 Hz), 7.34-7.36 (m, 1H), 7.45-7.50 (m, 1H), 7.67 (dd, 1H, *J* = 9.0, 2.4 Hz), 8.02 (d, 1H, *J* = 2.4 Hz), 8.10 (s, 1H), 8.56 (s, 1H), 9.75 (s, 1H). *ms* (MH)⁺ = 382.3.

ErbB4 Enzyme Assays:

Compounds of the present invention may be tested for ErbB-4 protein tyrosine kinase inhibitory activity in substrate phosphorylation assays using enzymes purified from a baculovirus expression system. Reagent production and assay methodology were conducted essentially as described (Brignola, P.S., et al, (2002) *J. Biol. Chem.* v. **277** in press).

The method measures the ability of the isolated enzyme to catalyse the transfer of the γ-phosphate from ATP onto tyrosine residues in a

biotinylated synthetic peptide (biotin-Ahx-RAHEEIYHFFFAKKK-amide). Reactions were performed in 96-well polystyrene round-bottom plates in a final volume of 45 μ L. Reaction mixtures contained 50 mM MOPS (pH 7.5), 2 mM MnCl_2 , 10 μ M ATP, 0.125 μ Ci [γ - ^{33}P] ATP per reaction, 2 μ M peptide substrate, and 1mM dithiothreitol. Reactions were initiated by adding 1pmol (20nM) per reaction of the indicated enzyme. The reaction was allowed to proceed for 15 minutes, terminated and quantified using a scintillation proximity assay procedure as described in McDonald, O.B., Antonsson, B., Arkinstal, S., Marshall, C.J., and Wood, E.R. (1999) *Analytical Biochemistry*, **268**, 318-329.

Compounds under analysis were dissolved in Me_2SO to 0.5 mM and serially diluted 1 to 3 with Me_2SO through eleven columns of a 96 well plate. 1 μ L of each concentration was transferred to the corresponding well of the assay plate. This creates a final compound concentration range from 0.00019 to 11.1 μ M.

The data for dose responses were plotted as % Control calculated with the data reduction formula $100 \cdot (U1 - C2) / (C1 - C2)$ versus concentration of compound and fitted to the curve described by:

$$y = ((V_{\text{max}} * x) / (K + x))$$

where V_{max} is the upper asymptote and K is the IC_{50} . Typically, promising ErbB4 inhibitors will illicit a $\text{pIC}_{50} > 7.0$.

Crystallization and Data Collection

Crystals were obtained by the hanging drop vapor diffusion method. Protein (~4mg/ml in 20 mM HEPES pH 7.5, 300 mM NaCl, 5 mM DTT, 1mM CHAPS) was mixed with an equal volume of reservoir (50 mM cacodylate pH 6.5, 100 mM ammonium acetate, 10 mM Mg acetate, 30% PEG8000) and incubated at 22°C. Crystals belonged to the tetragonal space group $P4_3$ with

two molecules in the asymmetric unit and the following cell dimensions: $a=63.95 \text{ \AA}$, $b=63.95 \text{ \AA}$, $c=163.39 \text{ \AA}$, $\alpha=90^\circ$, $\beta=90^\circ$, $\gamma=90^\circ$.

Prior to data collection, glycerol and PEG400 was added to a final concentration of 25% and 5%, respectively, and the crystals were flash frozen in liquid N₂. Data was collected at beamline 17-BM on a MAR-CCD detector in the facilities of the Industrial Macromolecular Crystallography Association Collaborative Access Team (IMCA-CAT) at the Advanced Photon Source, Argonne National Laboratory. These facilities are supported by the companies of the Industrial Macromolecular Crystallography Association through a contract with Illinois Institute of Technology (IIT), executed through the IIT's Center for Synchrotron Radiation Research and Instrumentation. The data were processed using HKL2000.

Structure determination and refinement

The structure was solved by molecular replacement using CNX and FGFR1 as a search model (molecule 1 of PDB entry 1FGK). The search model contained FGFR1 residues 464-485, 491-500, 506-578, 592-647 and 651-761. Residues not conserved between FGFR1 and ErbB4 were truncated to alanine in the model. The correct solutions were the top two peaks in both the rotation and translation functions. Rigid body refinement gave an initial R-factor of 48%. Multiple rounds of model building and refinement were carried out with QUANTA and CNX. The overall structure was confirmed by a composite omit map calculated with CNX. Analysis of the structure with PROCHECK indicated that all main chain torsions fall within the allowed regions of the Ramachandran plot.

The results are depicted in Table 1 and 2 following.

(1) Amino Acid Sequence:

MKKGHHHHHHGLETELVEPLTPSGTAPNQAQLRILKETELKRVKVLGSGA
 FGTVYKGIWVPEGETVKIPVAIKILNETTGPKANVEFMDEALIMASMDHP
 HLVRLLGVCLSPITQLVTQLMPHGCLLEYVHEHKDNIGSQLLLNWCVQIA
 KGMMYLEERRLVHRDLAARNVLVKSPNHVKITDFGLARLLEGDEKEYNAD
 GGKMPIKWMALECIHYRKFTHQSDVWSYGVTTIWELMTFGGKPYDGIPTRE
 IPDLLEKGERLPQPPICTIDVYVMVMVKCWMIDADSRPKFKELAAEF SRMA
 RDPQRYLVIQGD DRMKLPSPNDSKFFQNLLEDLEDMMDAEEYLVPQAF
 NIPPPIYTSRARID (SEQ ID NO: 1)

DNA sequence 1: His-ErbB4 amino acids 690-999 nucleotide sequence:

1 ATGAAAAAAG	GTCATCATCA	TCATCATCAT	GGTTTGGAAA	CAGAGTTGGT
51 GGAACCATTA	ACTCCCAGTG	GCACAGCACC	CAATCAAGCT	CAACTTCGTA
101 TTTTGAAAGA	AACTGAGCTG	AAGAGGGTAA	AAGTCCTTGG	CTCAGGTGCT
151 TTTGGAACGG	TTTATAAAGG	TATTTGGGTA	CCTGAAGGAG	AAACTGTGAA
201 GATTCCTGTG	GCTATTAAGA	TTCTTAATGA	GACAACTGGT	CCCAAGGCAA
251 ATGTGGAGTT	CATGGATGAA	GCTCTGATCA	TGGCAAGTAT	GGATCATCCA
301 CACCTAGTCC	GGTTGCTGGG	TGTGTGTCTG	AGCCCAACCA	TCCAGCTGGT
351 TACTCAACTT	ATGCCCCATG	GCTGCCTGTT	GGAGTATGTC	CACGAGCACA
401 AGGATAACAT	TGGATCACAA	CTGCTGCTTA	ACTGGTGTGT	CCAGATAGCT
451 AAGGGAATGA	TGTACCTGGA	AGAAAGACGA	CTCGTTCATC	GGGATTTGGC
501 AGCCCGTAAT	GTCTTAGTGA	AATCTCCAAA	CCATGTGAAA	ATCACAGATT
551 TTGGGCTAGC	CAGACTCTTG	GAAGGAGATG	AAAAAGAGTA	CAATGCTGAT
601 GGAGGAAAGA	TGCCAATTAA	ATGGATGGCT	CTGGAGTGTA	TACATTACAG
651 GAAATTCACC	CATCAGAGTG	ACGTTTGGAG	CTATGGAGTT	ACTATATGGG
701 AACTGATGAC	CTTTGGAGGA	AAACCCTATG	ATGGAATTCC	AACGCGAGAA
751 ATCCCTGATT	TATTAGAGAA	AGGAGAACGT	TTGCCTCAGC	CTCCCATCTG
801 CACTATTGAC	GTTTACATGG	TCATGGTCAA	ATGTTGGATG	ATTGATGCTG
851 ACAGTAGACC	TAAATTTAAG	GAACTGGCTG	CTGAGTTTTC	AAGGATGGCT
901 CGAGACCCTC	AAAGATACCT	AGTTATT CAG	GGTGATGATC	GTATGAAGCT
951 TCCCAGTCCA	AATTGA			

SEQ ID No : 2.

TABLE 1: DATA STATISTICS

Space group	P4 ₃	
Unit Cell a (Å)		63.95
Unit Cell b (Å)		63.95
Unit Cell c (Å)		163.39
Unit Cell $\alpha=\beta=\gamma$ (°)	90	
Mol/asu	2	
Resolution (Å)		2.5
R _{sym} (%)		8.8
Completeness (%)	91.9	
R _{factor} (%)	21	
R _{free} (%)		27
Rmsd from ideal		
Bond lengths (Å)	0.011	
Bond angles (°)		1.48

Table 2

erbB4(690-999) thienopyrimidine cocrystal

resolution: 500.0 - 2.5 Å

sg= P4(3) a= 63.954 b= 63.954 c= 163.391 alpha= 90 beta= 90 gamma= 90

final r= 0.2130 free_r= 0.2762

rmsd bonds= 0.011188 rmsd angles= 1.48513

data completeness 91.9% Rmerge 8.8%

data collected on a marCCD at IMCA, -180C, processed with HKL2000, solved with CNX

ATOM	1	N	LEU A 698	-53.411	26.468	10.538	1.00	81.54
ATOM	2	CA	LEU A 698	-53.129	25.423	9.504	1.00	81.33
ATOM	3	C	LEU A 698	-53.233	26.015	8.103	1.00	81.09
ATOM	4	O	LEU A 698	-54.198	26.709	7.791	1.00	81.42
ATOM	5	CB	LEU A 698	-54.120	24.260	9.636	1.00	81.21
ATOM	6	CG	LEU A 698	-53.757	22.974	8.884	1.00	81.79
ATOM	7	CD1	LEU A 698	-52.552	22.311	9.555	1.00	81.75
ATOM	8	CD2	LEU A 698	-54.949	22.024	8.877	1.00	81.23
ATOM	9	N	THR A 699	-52.236	25.740	7.265	1.00	81.31
ATOM	10	CA	THR A 699	-52.210	26.243	5.890	1.00	82.23
ATOM	11	C	THR A 699	-51.171	25.519	5.018	1.00	82.37
ATOM	12	O	THR A 699	-50.003	25.905	4.971	1.00	82.32
ATOM	13	CB	THR A 699	-51.933	27.781	5.852	1.00	82.76
ATOM	14	OG1	THR A 699	-50.977	28.138	6.863	1.00	81.44
ATOM	15	CG2	THR A 699	-53.226	28.567	6.062	1.00	82.15
ATOM	16	N	PRO A 700	-51.593	24.452	4.315	1.00	82.54
ATOM	17	CA	PRO A 700	-50.743	23.642	3.435	1.00	82.57
ATOM	18	C	PRO A 700	-49.901	24.432	2.446	1.00	82.12
ATOM	19	O	PRO A 700	-50.175	25.596	2.159	1.00	82.75
ATOM	20	CB	PRO A 700	-51.747	22.741	2.724	1.00	82.43
ATOM	21	CG	PRO A 700	-52.758	22.504	3.777	1.00	82.66
ATOM	22	CD	PRO A 700	-52.958	23.898	4.353	1.00	83.18
ATOM	23	N	ALA A 701	-48.873	23.772	1.926	1.00	82.09
ATOM	24	CA	ALA A 701	-47.958	24.364	0.957	1.00	81.38
ATOM	25	C	ALA A 701	-47.697	23.318	-0.117	1.00	80.59
ATOM	26	O	ALA A 701	-47.769	22.118	0.149	1.00	81.14
ATOM	27	CB	ALA A 701	-46.646	24.755	1.643	1.00	81.49
ATOM	28	N	GLY A 702	-47.399	23.766	-1.328	1.00	79.29
ATOM	29	CA	GLY A 702	-47.139	22.814	-2.389	1.00	79.40
ATOM	30	C	GLY A 702	-46.042	21.833	-2.016	1.00	78.74
ATOM	31	O	GLY A 702	-46.226	20.612	-2.070	1.00	78.53
ATOM	32	N	THR A 703	-44.902	22.387	-1.615	1.00	77.41

ATOM	33	CA	THR A 703	-43.720	21.621	-1.238	1.00	75.67
ATOM	34	C	THR A 703	-43.960	20.300	-0.510	1.00	73.00
ATOM	35	O	THR A 703	-44.742	20.222	0.432	1.00	73.21
ATOM	36	CB	THR A 703	-42.780	22.481	-0.378	1.00	77.78
ATOM	37	OG1	THR A 703	-42.497	23.708	-1.065	1.00	78.99
ATOM	38	CG2	THR A 703	-41.473	21.740	-0.108	1.00	78.77
ATOM	39	N	ALA A 704	-43.259	19.264	-0.960	1.00	70.01
ATOM	40	CA	ALA A 704	-43.361	17.942	-0.366	1.00	66.51
ATOM	41	C	ALA A 704	-42.270	17.799	0.688	1.00	65.00
ATOM	42	O	ALA A 704	-41.318	18.588	0.737	1.00	63.04
ATOM	43	CB	ALA A 704	-43.201	16.872	-1.435	1.00	66.82
ATOM	44	N	PRO A 705	-42.395	16.788	1.552	1.00	62.77
ATOM	45	CA	PRO A 705	-41.399	16.577	2.597	1.00	61.58
ATOM	46	C	PRO A 705	-40.009	16.258	2.067	1.00	60.23
ATOM	47	O	PRO A 705	-39.843	15.521	1.095	1.00	61.36
ATOM	48	CB	PRO A 705	-41.993	15.430	3.410	1.00	61.65
ATOM	49	CG	PRO A 705	-42.736	14.656	2.391	1.00	63.07
ATOM	50	CD	PRO A 705	-43.418	15.730	1.581	1.00	63.22
ATOM	51	N	ASN A 706	-39.017	16.843	2.724	1.00	57.06
ATOM	52	CA	ASN A 706	-37.621	16.649	2.392	1.00	54.07
ATOM	53	C	ASN A 706	-37.112	15.494	3.264	1.00	53.97
ATOM	54	O	ASN A 706	-36.701	15.707	4.404	1.00	52.73
ATOM	55	CB	ASN A 706	-36.846	17.926	2.715	1.00	52.73
ATOM	56	CG	ASN A 706	-35.377	17.816	2.374	1.00	52.89
ATOM	57	OD1	ASN A 706	-34.883	16.732	2.070	1.00	51.75
ATOM	58	ND2	ASN A 706	-34.664	18.940	2.434	1.00	51.00
ATOM	59	N	GLN A 707	-37.137	14.274	2.740	1.00	51.97
ATOM	60	CA	GLN A 707	-36.679	13.147	3.536	1.00	53.28
ATOM	61	C	GLN A 707	-35.202	12.775	3.376	1.00	51.56
ATOM	62	O	GLN A 707	-34.813	11.628	3.611	1.00	50.32
ATOM	63	CB	GLN A 707	-37.563	11.925	3.280	1.00	52.48
ATOM	64	CG	GLN A 707	-38.988	12.125	3.736	1.00	57.13
ATOM	65	CD	GLN A 707	-39.850	10.906	3.491	1.00	60.12
ATOM	66	OE1	GLN A 707	-39.900	9.992	4.313	1.00	62.36
ATOM	67	NE2	GLN A 707	-40.523	10.876	2.338	1.00	60.48
ATOM	68	N	ALA A 708	-34.378	13.742	2.990	1.00	49.29
ATOM	69	CA	ALA A 708	-32.950	13.483	2.843	1.00	48.15
ATOM	70	C	ALA A 708	-32.400	13.031	4.202	1.00	48.57
ATOM	71	O	ALA A 708	-32.871	13.477	5.248	1.00	47.60
ATOM	72	CB	ALA A 708	-32.239	14.741	2.390	1.00	45.11
ATOM	73	N	GLN A 709	-31.416	12.138	4.187	1.00	49.32
ATOM	74	CA	GLN A 709	-30.824	11.662	5.430	1.00	49.62
ATOM	75	C	GLN A 709	-29.474	12.323	5.665	1.00	50.85
ATOM	76	O	GLN A 709	-28.692	12.528	4.736	1.00	52.52
ATOM	77	CB	GLN A 709	-30.627	10.145	5.388	1.00	48.60

ATOM	78	CG	GLN A 709	-31.897	9.345	5.182	1.00	47.70
ATOM	79	CD	GLN A 709	-32.848	9.427	6.353	1.00	47.21
ATOM	80	OE1	GLN A 709	-32.529	8.975	7.450	1.00	47.89
ATOM	81	NE2	GLN A 709	-34.027	10.004	6.126	1.00	44.74
ATOM	82	N	LEU A 710	-29.212	12.668	6.913	1.00	51.76
ATOM	83	CA	LEU A 710	-27.945	13.268	7.283	1.00	54.69
ATOM	84	C	LEU A 710	-27.458	12.404	8.424	1.00	55.52
ATOM	85	O	LEU A 710	-28.112	12.334	9.461	1.00	54.54
ATOM	86	CB	LEU A 710	-28.129	14.702	7.782	1.00	56.03
ATOM	87	CG	LEU A 710	-26.833	15.259	8.384	1.00	57.05
ATOM	88	CD1	LEU A 710	-25.863	15.544	7.264	1.00	56.49
ATOM	89	CD2	LEU A 710	-27.102	16.510	9.198	1.00	57.87
ATOM	90	N	ARG A 711	-26.321	11.742	8.247	1.00	56.82
ATOM	91	CA	ARG A 711	-25.821	10.877	9.302	1.00	58.00
ATOM	92	C	ARG A 711	-24.737	11.545	10.114	1.00	56.44
ATOM	93	O	ARG A 711	-23.756	12.036	9.577	1.00	55.70
ATOM	94	CB	ARG A 711	-25.327	9.556	8.710	1.00	60.89
ATOM	95	CG	ARG A 711	-26.351	8.925	7.763	1.00	67.44
ATOM	96	CD	ARG A 711	-25.971	7.525	7.317	1.00	71.94
ATOM	97	NE	ARG A 711	-26.098	6.561	8.406	1.00	76.65
ATOM	98	CZ	ARG A 711	-25.853	5.258	8.283	1.00	78.71
ATOM	99	NH1	ARG A 711	-25.465	4.760	7.111	1.00	78.46
ATOM	100	NH2	ARG A 711	-26.002	4.455	9.331	1.00	78.34
ATOM	101	N	ILE A 712	-24.946	11.584	11.422	1.00	57.82
ATOM	102	CA	ILE A 712	-23.988	12.181	12.342	1.00	59.70
ATOM	103	C	ILE A 712	-23.017	11.065	12.730	1.00	59.96
ATOM	104	O	ILE A 712	-23.401	10.089	13.363	1.00	59.83
ATOM	105	CB	ILE A 712	-24.727	12.748	13.562	1.00	59.41
ATOM	106	CG1	ILE A 712	-25.841	13.673	13.057	1.00	60.67
ATOM	107	CG2	ILE A 712	-23.760	13.512	14.469	1.00	57.78
ATOM	108	CD1	ILE A 712	-26.793	14.166	14.119	1.00	62.84
ATOM	109	N	LEU A 713	-21.761	11.215	12.328	1.00	60.81
ATOM	110	CA	LEU A 713	-20.753	10.191	12.566	1.00	62.74
ATOM	111	C	LEU A 713	-19.812	10.411	13.736	1.00	63.70
ATOM	112	O	LEU A 713	-19.297	11.512	13.939	1.00	63.91
ATOM	113	CB	LEU A 713	-19.907	10.007	11.307	1.00	62.56
ATOM	114	CG	LEU A 713	-20.661	9.698	10.016	1.00	62.99
ATOM	115	CD1	LEU A 713	-19.656	9.255	8.970	1.00	64.29
ATOM	116	CD2	LEU A 713	-21.714	8.620	10.254	1.00	62.63
ATOM	117	N	ALA A 714	-19.581	9.343	14.494	1.00	64.16
ATOM	118	CA	ALA A 714	-18.669	9.405	15.618	1.00	64.73
ATOM	119	C	ALA A 714	-17.294	9.443	14.978	1.00	65.80
ATOM	120	O	ALA A 714	-17.011	8.687	14.047	1.00	65.21
ATOM	121	CB	ALA A 714	-18.816	8.168	16.494	1.00	65.59
ATOM	122	N	GLU A 715	-16.461	10.352	15.470	1.00	67.13

ATOM	123	CA	GLU A 715	-15.092	10.556	15.000	1.00	68.35
ATOM	124	C	GLU A 715	-14.346	9.234	14.778	1.00	68.80
ATOM	125	O	GLU A 715	-13.419	9.145	13.965	1.00	67.36
ATOM	126	CB	GLU A 715	-14.370	11.404	16.046	1.00	70.35
ATOM	127	CG	GLU A 715	-12.937	11.784	15.762	1.00	74.38
ATOM	128	CD	GLU A 715	-12.337	12.568	16.925	1.00	76.58
ATOM	129	OE1	GLU A 715	-11.155	12.966	16.837	1.00	79.37
ATOM	130	OE2	GLU A 715	-13.051	12.785	17.932	1.00	75.16
ATOM	131	N	THR A 716	-14.779	8.211	15.509	1.00	68.91
ATOM	132	CA	THR A 716	-14.189	6.880	15.465	1.00	68.54
ATOM	133	C	THR A 716	-14.486	6.062	14.214	1.00	67.91
ATOM	134	O	THR A 716	-13.757	5.117	13.901	1.00	67.89
ATOM	135	CB	THR A 716	-14.643	6.049	16.675	1.00	69.38
ATOM	136	OG1	THR A 716	-14.187	4.700	16.521	1.00	72.15
ATOM	137	CG2	THR A 716	-16.163	6.049	16.782	1.00	69.99
ATOM	138	N	GLU A 717	-15.551	6.408	13.500	1.00	66.43
ATOM	139	CA	GLU A 717	-15.910	5.661	12.302	1.00	65.47
ATOM	140	C	GLU A 717	-15.111	6.104	11.085	1.00	64.70
ATOM	141	O	GLU A 717	-15.137	5.440	10.047	1.00	63.74
ATOM	142	CB	GLU A 717	-17.408	5.806	12.035	1.00	65.65
ATOM	143	CG	GLU A 717	-18.276	5.259	13.166	1.00	65.53
ATOM	144	CD	GLU A 717	-19.658	5.892	13.215	1.00	65.95
ATOM	145	OE1	GLU A 717	-20.471	5.662	12.291	1.00	62.49
ATOM	146	OE2	GLU A 717	-19.922	6.635	14.187	1.00	67.09
ATOM	147	N	LEU A 718	-14.382	7.211	11.223	1.00	64.90
ATOM	148	CA	LEU A 718	-13.591	7.752	10.119	1.00	65.63
ATOM	149	C	LEU A 718	-12.082	7.598	10.274	1.00	67.11
ATOM	150	O	LEU A 718	-11.521	7.846	11.345	1.00	66.91
ATOM	151	CB	LEU A 718	-13.909	9.236	9.917	1.00	64.23
ATOM	152	CG	LEU A 718	-15.353	9.609	9.575	1.00	64.11
ATOM	153	CD1	LEU A 718	-15.478	11.119	9.521	1.00	63.98
ATOM	154	CD2	LEU A 718	-15.757	8.988	8.251	1.00	62.29
ATOM	155	N	ALA A 719	-11.435	7.204	9.178	1.00	67.97
ATOM	156	CA	ALA A 719	-9.986	7.027	9.139	1.00	67.89
ATOM	157	C	ALA A 719	-9.394	7.806	7.968	1.00	67.48
ATOM	158	O	ALA A 719	-9.687	7.518	6.805	1.00	67.27
ATOM	159	CB	ALA A 719	-9.634	5.544	9.004	1.00	66.89
ATOM	160	N	ARG A 720	-8.572	8.801	8.284	1.00	67.63
ATOM	161	CA	ARG A 720	-7.918	9.605	7.264	1.00	67.22
ATOM	162	C	ARG A 720	-6.859	8.725	6.599	1.00	69.63
ATOM	163	O	ARG A 720	-6.763	7.534	6.890	1.00	70.38
ATOM	164	CB	ARG A 720	-7.230	10.810	7.901	1.00	65.71
ATOM	165	CG	ARG A 720	-8.103	11.668	8.793	1.00	65.13
ATOM	166	CD	ARG A 720	-7.881	13.135	8.465	1.00	65.92
ATOM	167	NE	ARG A 720	-8.268	14.063	9.529	1.00	67.39

ATOM	168	CZ	ARG A 720	-9.421	14.033	10.197	1.00	70.61
ATOM	169	NH1	ARG A 720	-10.342	13.103	9.939	1.00	70.23
ATOM	170	NH2	ARG A 720	-9.670	14.966	11.112	1.00	70.99
ATOM	171	N	VAL A 721	-6.060	9.315	5.716	1.00	71.34
ATOM	172	CA	VAL A 721	-4.988	8.599	5.018	1.00	71.66
ATOM	173	C	VAL A 721	-3.988	9.622	4.478	1.00	73.14
ATOM	174	O	VAL A 721	-3.027	10.001	5.157	1.00	73.20
ATOM	175	CB	VAL A 721	-5.533	7.764	3.833	1.00	70.82
ATOM	176	CG1	VAL A 721	-4.386	7.253	2.984	1.00	70.96
ATOM	177	CG2	VAL A 721	-6.344	6.592	4.347	1.00	70.37
ATOM	178	N	ALA A 722	-4.225	10.063	3.249	1.00	73.97
ATOM	179	CA	ALA A 722	-3.381	11.060	2.611	1.00	73.28
ATOM	180	C	ALA A 722	-4.262	12.283	2.405	1.00	72.83
ATOM	181	O	ALA A 722	-5.476	12.231	2.627	1.00	73.18
ATOM	182	CB	ALA A 722	-2.873	10.545	1.262	1.00	72.83
ATOM	183	N	VAL A 723	-3.640	13.381	1.996	1.00	71.49
ATOM	184	CA	VAL A 723	-4.356	14.615	1.728	1.00	68.53
ATOM	185	C	VAL A 723	-4.620	14.680	0.231	1.00	68.55
ATOM	186	O	VAL A 723	-3.765	14.319	-0.576	1.00	67.71
ATOM	187	CB	VAL A 723	-3.527	15.842	2.138	1.00	67.22
ATOM	188	CG1	VAL A 723	-4.174	17.111	1.605	1.00	66.63
ATOM	189	CG2	VAL A 723	-3.410	15.900	3.649	1.00	66.06
ATOM	190	N	LEU A 724	-5.815	15.120	-0.138	1.00	68.80
ATOM	191	CA	LEU A 724	-6.164	15.243	-1.542	1.00	68.52
ATOM	192	C	LEU A 724	-5.904	16.689	-1.969	1.00	69.72
ATOM	193	O	LEU A 724	-5.843	17.008	-3.156	1.00	71.11
ATOM	194	CB	LEU A 724	-7.630	14.859	-1.739	1.00	66.79
ATOM	195	CG	LEU A 724	-7.933	13.385	-1.456	1.00	65.65
ATOM	196	CD1	LEU A 724	-9.426	13.156	-1.423	1.00	65.45
ATOM	197	CD2	LEU A 724	-7.287	12.516	-2.526	1.00	66.07
ATOM	198	N	GLY A 725	-5.721	17.554	-0.979	1.00	70.85
ATOM	199	CA	GLY A 725	-5.467	18.954	-1.244	1.00	72.13
ATOM	200	C	GLY A 725	-6.098	19.804	-0.160	1.00	73.79
ATOM	201	O	GLY A 725	-6.806	19.290	0.707	1.00	73.67
ATOM	202	N	SER A 726	-5.842	21.106	-0.204	1.00	75.09
ATOM	203	CA	SER A 726	-6.400	22.022	0.780	1.00	76.38
ATOM	204	C	SER A 726	-6.234	23.459	0.316	1.00	76.97
ATOM	205	O	SER A 726	-5.127	23.899	0.005	1.00	77.58
ATOM	206	CB	SER A 726	-5.707	21.846	2.133	1.00	77.43
ATOM	207	OG	SER A 726	-4.369	22.314	2.090	1.00	77.62
ATOM	208	N	GLY A 727	-7.346	24.183	0.265	1.00	77.88
ATOM	209	CA	GLY A 727	-7.309	25.570	-0.151	1.00	77.49
ATOM	210	C	GLY A 727	-7.857	26.428	0.962	1.00	77.71
ATOM	211	O	GLY A 727	-7.950	25.984	2.107	1.00	76.78
ATOM	212	N	ALA A 728	-8.222	27.658	0.633	1.00	78.59

ATOM	213	CA	ALA A 728	-8.772	28.569	1.623	1.00	79.53
ATOM	214	C	ALA A 728	-10.094	28.003	2.130	1.00	80.29
ATOM	215	O	ALA A 728	-10.689	28.515	3.081	1.00	80.59
ATOM	216	CB	ALA A 728	-8.991	29.934	0.999	1.00	80.42
ATOM	217	N	PHE A 729	-10.533	26.924	1.495	1.00	80.52
ATOM	218	CA	PHE A 729	-11.789	26.283	1.845	1.00	80.77
ATOM	219	C	PHE A 729	-11.635	25.114	2.815	1.00	80.36
ATOM	220	O	PHE A 729	-12.611	24.430	3.122	1.00	81.24
ATOM	221	CB	PHE A 729	-12.480	25.821	0.563	1.00	81.06
ATOM	222	CG	PHE A 729	-12.521	26.879	-0.503	1.00	82.69
ATOM	223	CD1	PHE A 729	-11.372	27.197	-1.230	1.00	83.00
ATOM	224	CD2	PHE A 729	-13.690	27.601	-0.744	1.00	82.96
ATOM	225	CE1	PHE A 729	-11.385	28.222	-2.180	1.00	82.28
ATOM	226	CE2	PHE A 729	-13.712	28.625	-1.690	1.00	82.16
ATOM	227	CZ	PHE A 729	-12.555	28.936	-2.408	1.00	81.83
ATOM	228	N	GLY A 730	-10.417	24.895	3.307	1.00	78.97
ATOM	229	CA	GLY A 730	-10.176	23.800	4.234	1.00	75.86
ATOM	230	C	GLY A 730	-9.385	22.674	3.591	1.00	74.02
ATOM	231	O	GLY A 730	-9.022	22.756	2.418	1.00	74.18
ATOM	232	N	THR A 731	-9.124	21.613	4.347	1.00	71.57
ATOM	233	CA	THR A 731	-8.366	20.489	3.821	1.00	69.93
ATOM	234	C	THR A 731	-9.233	19.271	3.521	1.00	69.30
ATOM	235	O	THR A 731	-10.110	18.911	4.310	1.00	68.76
ATOM	236	CB	THR A 731	-7.255	20.078	4.795	1.00	70.50
ATOM	237	OG1	THR A 731	-6.360	21.180	4.985	1.00	69.99
ATOM	238	CG2	THR A 731	-6.479	18.893	4.244	1.00	69.46
ATOM	239	N	VAL A 732	-8.971	18.639	2.378	1.00	68.82
ATOM	240	CA	VAL A 732	-9.720	17.462	1.944	1.00	69.33
ATOM	241	C	VAL A 732	-8.852	16.202	1.933	1.00	70.00
ATOM	242	O	VAL A 732	-7.975	16.057	1.087	1.00	70.94
ATOM	243	CB	VAL A 732	-10.299	17.658	0.517	1.00	69.44
ATOM	244	CG1	VAL A 732	-11.149	16.457	0.143	1.00	69.31
ATOM	245	CG2	VAL A 732	-11.123	18.942	0.439	1.00	67.78
ATOM	246	N	TYR A 733	-9.112	15.291	2.867	1.00	70.94
ATOM	247	CA	TYR A 733	-8.361	14.040	2.980	1.00	70.76
ATOM	248	C	TYR A 733	-9.094	12.875	2.331	1.00	71.20
ATOM	249	O	TYR A 733	-10.322	12.862	2.263	1.00	70.51
ATOM	250	CB	TYR A 733	-8.164	13.661	4.449	1.00	73.12
ATOM	251	CG	TYR A 733	-7.466	14.679	5.318	1.00	75.05
ATOM	252	CD1	TYR A 733	-6.080	14.646	5.498	1.00	75.57
ATOM	253	CD2	TYR A 733	-8.193	15.665	5.984	1.00	75.38
ATOM	254	CE1	TYR A 733	-5.439	15.571	6.326	1.00	74.72
ATOM	255	CE2	TYR A 733	-7.564	16.594	6.809	1.00	75.15
ATOM	256	CZ	TYR A 733	-6.191	16.541	6.973	1.00	75.27
ATOM	257	OH	TYR A 733	-5.578	17.472	7.774	1.00	77.22

ATOM	258	N	LYS A 734	-8.340	11.888	1.857	1.00	72.36
ATOM	259	CA	LYS A 734	-8.955	10.688	1.294	1.00	72.08
ATOM	260	C	LYS A 734	-9.168	9.821	2.534	1.00	71.34
ATOM	261	O	LYS A 734	-8.445	9.984	3.524	1.00	69.91
ATOM	262	CB	LYS A 734	-8.005	9.974	0.333	1.00	72.27
ATOM	263	CG	LYS A 734	-8.519	8.605	-0.097	1.00	73.95
ATOM	264	CD	LYS A 734	-7.471	7.804	-0.857	1.00	73.38
ATOM	265	CE	LYS A 734	-7.982	6.400	-1.146	1.00	73.91
ATOM	266	NZ	LYS A 734	-7.047	5.599	-1.976	1.00	72.92
ATOM	267	N	GLY A 735	-10.139	8.913	2.512	1.00	70.61
ATOM	268	CA	GLY A 735	-10.338	8.104	3.702	1.00	71.08
ATOM	269	C	GLY A 735	-11.390	7.015	3.719	1.00	71.04
ATOM	270	O	GLY A 735	-12.152	6.839	2.767	1.00	71.51
ATOM	271	N	ILE A 736	-11.422	6.281	4.829	1.00	71.26
ATOM	272	CA	ILE A 736	-12.368	5.188	5.005	1.00	72.22
ATOM	273	C	ILE A 736	-13.364	5.496	6.107	1.00	72.21
ATOM	274	O	ILE A 736	-13.003	6.023	7.161	1.00	71.05
ATOM	275	CB	ILE A 736	-11.673	3.867	5.415	1.00	73.36
ATOM	276	CG1	ILE A 736	-10.379	3.663	4.621	1.00	74.33
ATOM	277	CG2	ILE A 736	-12.627	2.698	5.186	1.00	71.11
ATOM	278	CD1	ILE A 736	-9.552	2.470	5.102	1.00	75.22
ATOM	279	N	TRP A 737	-14.618	5.146	5.858	1.00	72.87
ATOM	280	CA	TRP A 737	-15.674	5.346	6.832	1.00	73.66
ATOM	281	C	TRP A 737	-16.373	4.014	7.085	1.00	75.42
ATOM	282	O	TRP A 737	-16.835	3.358	6.147	1.00	75.21
ATOM	283	CB	TRP A 737	-16.681	6.383	6.328	1.00	71.21
ATOM	284	CG	TRP A 737	-17.960	6.395	7.106	1.00	69.09
ATOM	285	CD1	TRP A 737	-18.096	6.373	8.466	1.00	68.36
ATOM	286	CD2	TRP A 737	-19.285	6.432	6.571	1.00	68.26
ATOM	287	NE1	TRP A 737	-19.426	6.391	8.810	1.00	67.91
ATOM	288	CE2	TRP A 737	-20.179	6.430	7.668	1.00	67.63
ATOM	289	CE3	TRP A 737	-19.806	6.470	5.271	1.00	67.83
ATOM	290	CZ2	TRP A 737	-21.565	6.463	7.506	1.00	67.13
ATOM	291	CZ3	TRP A 737	-21.189	6.503	5.107	1.00	68.96
ATOM	292	CH2	TRP A 737	-22.053	6.500	6.223	1.00	68.91
ATOM	293	N	VAL A 738	-16.437	3.619	8.355	1.00	76.80
ATOM	294	CA	VAL A 738	-17.085	2.374	8.746	1.00	78.00
ATOM	295	C	VAL A 738	-18.328	2.714	9.563	1.00	79.76
ATOM	296	O	VAL A 738	-18.226	3.062	10.736	1.00	80.23
ATOM	297	CB	VAL A 738	-16.146	1.511	9.600	1.00	78.37
ATOM	298	CG1	VAL A 738	-16.738	0.125	9.772	1.00	77.43
ATOM	299	CG2	VAL A 738	-14.761	1.446	8.957	1.00	77.28
ATOM	300	N	PRO A 739	-19.518	2.605	8.948	1.00	81.79
ATOM	301	CA	PRO A 739	-20.837	2.887	9.531	1.00	83.53
ATOM	302	C	PRO A 739	-21.013	2.624	11.025	1.00	85.81

ATOM	303	O	PRO A 739	-20.216	1.912	11.643	1.00	85.32
ATOM	304	CB	PRO A 739	-21.768	2.042	8.676	1.00	82.99
ATOM	305	CG	PRO A 739	-21.149	2.186	7.327	1.00	83.21
ATOM	306	CD	PRO A 739	-19.671	1.980	7.621	1.00	82.26
ATOM	307	N	ALA A 740	-22.076	3.207	11.585	1.00	87.67
ATOM	308	CA	ALA A 740	-22.407	3.091	13.008	1.00	89.23
ATOM	309	C	ALA A 740	-22.747	1.670	13.453	1.00	90.19
ATOM	310	O	ALA A 740	-23.730	1.456	14.170	1.00	90.44
ATOM	311	CB	ALA A 740	-23.571	4.031	13.345	1.00	88.58
ATOM	312	N	GLY A 741	-21.929	0.708	13.034	1.00	90.71
ATOM	313	CA	GLY A 741	-22.156	-0.680	13.396	1.00	91.14
ATOM	314	C	GLY A 741	-22.167	-1.612	12.199	1.00	91.59
ATOM	315	O	GLY A 741	-23.100	-2.396	12.025	1.00	91.52
ATOM	316	N	GLU A 742	-21.130	-1.528	11.369	1.00	91.74
ATOM	317	CA	GLU A 742	-21.033	-2.374	10.185	1.00	91.44
ATOM	318	C	GLU A 742	-19.579	-2.705	9.875	1.00	91.13
ATOM	319	O	GLU A 742	-18.667	-2.139	10.475	1.00	90.38
ATOM	320	CB	GLU A 742	-21.688	-1.680	8.986	1.00	91.24
ATOM	321	CG	GLU A 742	-23.106	-1.209	9.276	1.00	91.68
ATOM	322	CD	GLU A 742	-23.905	-0.905	8.027	1.00	92.00
ATOM	323	OE1	GLU A 742	-23.483	-0.040	7.232	1.00	91.88
ATOM	324	OE2	GLU A 742	-24.966	-1.538	7.844	1.00	91.68
ATOM	325	N	ALA A 743	-19.370	-3.625	8.936	1.00	91.28
ATOM	326	CA	ALA A 743	-18.024	-4.048	8.559	1.00	91.22
ATOM	327	C	ALA A 743	-17.472	-3.312	7.335	1.00	91.06
ATOM	328	O	ALA A 743	-16.276	-3.011	7.273	1.00	90.46
ATOM	329	CB	ALA A 743	-18.010	-5.559	8.307	1.00	90.34
ATOM	330	N	VAL A 744	-18.346	-3.025	6.371	1.00	90.80
ATOM	331	CA	VAL A 744	-17.950	-2.344	5.135	1.00	89.78
ATOM	332	C	VAL A 744	-17.025	-1.146	5.353	1.00	88.68
ATOM	333	O	VAL A 744	-17.191	-0.380	6.301	1.00	89.33
ATOM	334	CB	VAL A 744	-19.191	-1.867	4.323	1.00	89.22
ATOM	335	CG1	VAL A 744	-20.073	-3.053	3.983	1.00	89.59
ATOM	336	CG2	VAL A 744	-19.975	-0.831	5.111	1.00	88.82
ATOM	337	N	LYS A 745	-16.042	-0.999	4.469	1.00	86.57
ATOM	338	CA	LYS A 745	-15.098	0.111	4.542	1.00	84.05
ATOM	339	C	LYS A 745	-15.364	1.094	3.401	1.00	82.42
ATOM	340	O	LYS A 745	-14.580	1.174	2.460	1.00	81.96
ATOM	341	CB	LYS A 745	-13.655	-0.399	4.439	1.00	83.71
ATOM	342	CG	LYS A 745	-13.093	-1.055	5.696	1.00	82.67
ATOM	343	CD	LYS A 745	-11.580	-1.229	5.574	1.00	81.20
ATOM	344	CE	LYS A 745	-10.962	-1.742	6.864	1.00	81.60
ATOM	345	NZ	LYS A 745	-9.473	-1.807	6.792	1.00	80.27
ATOM	346	N	ILE A 746	-16.469	1.834	3.486	1.00	80.20
ATOM	347	CA	ILE A 746	-16.829	2.804	2.451	1.00	77.59

ATOM	348	C	ILE A 746	-15.753	3.867	2.234	1.00	75.28
ATOM	349	O	ILE A 746	-15.354	4.565	3.165	1.00	75.06
ATOM	350	CB	ILE A 746	-18.153	3.521	2.784	1.00	78.03
ATOM	351	CG1	ILE A 746	-19.299	2.508	2.844	1.00	78.83
ATOM	352	CG2	ILE A 746	-18.451	4.568	1.726	1.00	79.05
ATOM	353	CD1	ILE A 746	-20.671	3.125	3.096	1.00	78.81
ATOM	354	N	PRO A 747	-15.268	4.000	0.990	1.00	74.01
ATOM	355	CA	PRO A 747	-14.235	4.985	0.654	1.00	71.83
ATOM	356	C	PRO A 747	-14.866	6.370	0.601	1.00	70.14
ATOM	357	O	PRO A 747	-15.882	6.574	-0.077	1.00	68.69
ATOM	358	CB	PRO A 747	-13.753	4.510	-0.709	1.00	71.63
ATOM	359	CG	PRO A 747	-15.018	4.016	-1.336	1.00	72.44
ATOM	360	CD	PRO A 747	-15.673	3.237	-0.207	1.00	74.00
ATOM	361	N	VAL A 748	-14.269	7.322	1.311	1.00	67.54
ATOM	362	CA	VAL A 748	-14.820	8.669	1.346	1.00	65.96
ATOM	363	C	VAL A 748	-13.797	9.791	1.302	1.00	64.98
ATOM	364	O	VAL A 748	-12.584	9.565	1.370	1.00	63.82
ATOM	365	CB	VAL A 748	-15.659	8.902	2.622	1.00	66.10
ATOM	366	CG1	VAL A 748	-16.839	7.953	2.666	1.00	65.30
ATOM	367	CG2	VAL A 748	-14.776	8.731	3.846	1.00	64.29
ATOM	368	N	ALA A 749	-14.325	11.008	1.179	1.00	62.57
ATOM	369	CA	ALA A 749	-13.525	12.221	1.172	1.00	61.68
ATOM	370	C	ALA A 749	-14.004	12.942	2.411	1.00	61.42
ATOM	371	O	ALA A 749	-15.204	13.026	2.656	1.00	62.73
ATOM	372	CB	ALA A 749	-13.814	13.058	-0.060	1.00	60.54
ATOM	373	N	ILE A 750	-13.070	13.432	3.212	1.00	60.76
ATOM	374	CA	ILE A 750	-13.425	14.143	4.423	1.00	59.53
ATOM	375	C	ILE A 750	-12.830	15.519	4.312	1.00	58.84
ATOM	376	O	ILE A 750	-11.650	15.667	4.014	1.00	58.42
ATOM	377	CB	ILE A 750	-12.855	13.456	5.671	1.00	59.88
ATOM	378	CG1	ILE A 750	-13.315	11.999	5.710	1.00	61.77
ATOM	379	CG2	ILE A 750	-13.312	14.193	6.917	1.00	59.44
ATOM	380	CD1	ILE A 750	-12.707	11.180	6.836	1.00	64.53
ATOM	381	N	LYS A 751	-13.654	16.529	4.532	1.00	59.29
ATOM	382	CA	LYS A 751	-13.188	17.897	4.458	1.00	60.16
ATOM	383	C	LYS A 751	-13.373	18.529	5.814	1.00	61.42
ATOM	384	O	LYS A 751	-14.406	18.347	6.463	1.00	60.51
ATOM	385	CB	LYS A 751	-13.982	18.676	3.410	1.00	59.82
ATOM	386	CG	LYS A 751	-13.519	20.109	3.247	1.00	59.02
ATOM	387	CD	LYS A 751	-14.138	20.745	2.021	1.00	58.49
ATOM	388	CE	LYS A 751	-13.435	22.035	1.690	1.00	57.20
ATOM	389	NZ	LYS A 751	-13.915	22.606	0.411	1.00	58.47
ATOM	390	N	ILE A 752	-12.365	19.271	6.242	1.00	63.64
ATOM	391	CA	ILE A 752	-12.420	19.935	7.528	1.00	66.22
ATOM	392	C	ILE A 752	-12.349	21.438	7.329	1.00	67.39

ATOM	393	O	ILE A 752	-11.394	21.945	6.749	1.00	67.55
ATOM	394	CB	ILE A 752	-11.256	19.473	8.422	1.00	66.68
ATOM	395	CG1	ILE A 752	-11.241	17.943	8.481	1.00	66.85
ATOM	396	CG2	ILE A 752	-11.404	20.065	9.818	1.00	67.28
ATOM	397	CD1	ILE A 752	-10.147	17.356	9.336	1.00	66.47
ATOM	398	N	ALA A 753	-13.372	22.146	7.799	1.00	70.53
ATOM	399	CA	ALA A 753	-13.419	23.602	7.673	1.00	74.64
ATOM	400	C	ALA A 753	-12.365	24.214	8.594	1.00	76.96
ATOM	401	O	ALA A 753	-11.877	23.534	9.500	1.00	77.82
ATOM	402	CB	ALA A 753	-14.806	24.110	8.038	1.00	73.77
ATOM	403	N	VAL A 754	-12.020	25.485	8.372	1.00	79.45
ATOM	404	CA	VAL A 754	-10.997	26.157	9.189	1.00	81.01
ATOM	405	CB	VAL A 754	-10.273	27.279	8.378	1.00	80.88
ATOM	406	CG1	VAL A 754	-8.977	27.694	9.096	1.00	78.71
ATOM	407	CG2	VAL A 754	-9.989	26.799	6.945	1.00	79.23
ATOM	408	C	VAL A 754	-11.541	26.769	10.494	1.00	82.00
ATOM	409	OT1	VAL A 754	-11.212	27.942	10.798	1.00	82.05
ATOM	410	OT2	VAL A 754	-12.277	26.057	11.216	1.00	82.11
ATOM	411	N	ALA A 761	-22.557	30.871	14.717	1.00	87.31
ATOM	412	CA	ALA A 761	-22.100	30.438	13.364	1.00	87.94
ATOM	413	C	ALA A 761	-22.469	28.982	13.071	1.00	88.76
ATOM	414	O	ALA A 761	-23.035	28.682	12.017	1.00	89.19
ATOM	415	CB	ALA A 761	-20.589	30.632	13.236	1.00	86.83
ATOM	416	N	ASN A 762	-22.147	28.080	13.995	1.00	88.98
ATOM	417	CA	ASN A 762	-22.459	26.666	13.812	1.00	89.06
ATOM	418	C	ASN A 762	-23.933	26.471	13.493	1.00	89.09
ATOM	419	O	ASN A 762	-24.339	25.428	12.975	1.00	89.26
ATOM	420	CB	ASN A 762	-22.083	25.865	15.060	1.00	89.85
ATOM	421	CG	ASN A 762	-20.608	25.519	15.102	1.00	90.47
ATOM	422	OD1	ASN A 762	-19.749	26.403	15.132	1.00	89.73
ATOM	423	ND2	ASN A 762	-20.306	24.225	15.098	1.00	90.01
ATOM	424	N	VAL A 763	-24.735	27.481	13.811	1.00	88.96
ATOM	425	CA	VAL A 763	-26.160	27.425	13.533	1.00	88.35
ATOM	426	C	VAL A 763	-26.274	27.447	12.020	1.00	88.39
ATOM	427	O	VAL A 763	-26.950	26.609	11.427	1.00	88.27
ATOM	428	CB	VAL A 763	-26.899	28.657	14.076	1.00	88.18
ATOM	429	CG1	VAL A 763	-28.380	28.348	14.200	1.00	87.36
ATOM	430	CG2	VAL A 763	-26.302	29.086	15.406	1.00	88.46
ATOM	431	N	GLU A 764	-25.598	28.420	11.408	1.00	87.88
ATOM	432	CA	GLU A 764	-25.599	28.574	9.956	1.00	86.88
ATOM	433	C	GLU A 764	-25.164	27.260	9.339	1.00	84.91
ATOM	434	O	GLU A 764	-25.826	26.724	8.448	1.00	85.31
ATOM	435	CB	GLU A 764	-24.609	29.654	9.507	1.00	88.52
ATOM	436	CG	GLU A 764	-24.708	30.982	10.231	1.00	90.41
ATOM	437	CD	GLU A 764	-23.821	32.047	9.600	1.00	91.24

ATOM	438	OE1 GLU A 764	-22.685	31.714	9.190	1.00	92.50
ATOM	439	OE2 GLU A 764	-24.254	33.218	9.523	1.00	91.08
ATOM	440	N PHE A 765	-24.037	26.751	9.823	1.00	81.83
ATOM	441	CA PHE A 765	-23.491	25.507	9.322	1.00	78.37
ATOM	442	C PHE A 765	-24.495	24.367	9.297	1.00	75.51
ATOM	443	O PHE A 765	-24.687	23.722	8.269	1.00	74.23
ATOM	444	CB PHE A 765	-22.280	25.080	10.141	1.00	79.06
ATOM	445	CG PHE A 765	-21.729	23.762	9.717	1.00	80.47
ATOM	446	CD1 PHE A 765	-22.371	22.577	10.079	1.00	81.96
ATOM	447	CD2 PHE A 765	-20.638	23.701	8.861	1.00	80.75
ATOM	448	CE1 PHE A 765	-21.945	21.353	9.586	1.00	81.90
ATOM	449	CE2 PHE A 765	-20.201	22.482	8.360	1.00	82.39
ATOM	450	CZ PHE A 765	-20.861	21.302	8.722	1.00	82.56
ATOM	451	N MET A 766	-25.117	24.092	10.433	1.00	72.71
ATOM	452	CA MET A 766	-26.083	23.014	10.472	1.00	70.93
ATOM	453	C MET A 766	-27.205	23.255	9.468	1.00	69.55
ATOM	454	O MET A 766	-27.946	22.338	9.120	1.00	70.42
ATOM	455	CB MET A 766	-26.638	22.849	11.887	1.00	71.33
ATOM	456	CG MET A 766	-25.603	22.336	12.873	1.00	71.61
ATOM	457	SD MET A 766	-24.622	20.959	12.199	1.00	74.04
ATOM	458	CE MET A 766	-25.720	19.631	12.348	1.00	69.51
ATOM	459	N ASP A 767	-27.331	24.489	8.995	1.00	66.54
ATOM	460	CA ASP A 767	-28.355	24.795	8.011	1.00	65.26
ATOM	461	C ASP A 767	-27.783	24.538	6.629	1.00	63.58
ATOM	462	O ASP A 767	-28.415	23.896	5.795	1.00	64.00
ATOM	463	CB ASP A 767	-28.807	26.249	8.131	1.00	67.20
ATOM	464	CG ASP A 767	-29.615	26.504	9.390	1.00	68.51
ATOM	465	OD1 ASP A 767	-30.624	25.794	9.594	1.00	68.20
ATOM	466	OD2 ASP A 767	-29.242	27.408	10.172	1.00	68.59
ATOM	467	N GLU A 768	-26.577	25.034	6.395	1.00	61.36
ATOM	468	CA GLU A 768	-25.917	24.841	5.118	1.00	60.21
ATOM	469	C GLU A 768	-25.744	23.350	4.846	1.00	58.77
ATOM	470	O GLU A 768	-25.834	22.908	3.704	1.00	58.90
ATOM	471	CB GLU A 768	-24.555	25.531	5.123	1.00	62.67
ATOM	472	CG GLU A 768	-23.938	25.709	3.745	1.00	68.86
ATOM	473	CD GLU A 768	-24.809	26.548	2.806	1.00	72.06
ATOM	474	OE1 GLU A 768	-24.346	26.888	1.696	1.00	75.67
ATOM	475	OE2 GLU A 768	-25.960	26.866	3.168	1.00	73.63
ATOM	476	N ALA A 769	-25.515	22.574	5.902	1.00	56.78
ATOM	477	CA ALA A 769	-25.329	21.134	5.764	1.00	53.94
ATOM	478	C ALA A 769	-26.602	20.437	5.328	1.00	53.30
ATOM	479	O ALA A 769	-26.547	19.423	4.626	1.00	55.21
ATOM	480	CB ALA A 769	-24.840	20.544	7.065	1.00	53.65
ATOM	481	N LEU A 770	-27.749	20.963	5.751	1.00	51.12
ATOM	482	CA LEU A 770	-29.029	20.373	5.370	1.00	50.39

ATOM	483	C	LEU A 770	-29.127	20.440	3.851	1.00	49.87
ATOM	484	O	LEU A 770	-29.584	19.502	3.194	1.00	48.92
ATOM	485	CB	LEU A 770	-30.206	21.136	6.019	1.00	49.49
ATOM	486	CG	LEU A 770	-31.615	20.629	5.648	1.00	50.99
ATOM	487	CD1	LEU A 770	-32.640	20.997	6.711	1.00	51.18
ATOM	488	CD2	LEU A 770	-32.026	21.204	4.295	1.00	48.88
ATOM	489	N	ILE A 771	-28.683	21.561	3.298	1.00	49.87
ATOM	490	CA	ILE A 771	-28.714	21.751	1.860	1.00	50.49
ATOM	491	C	ILE A 771	-27.728	20.805	1.175	1.00	50.51
ATOM	492	O	ILE A 771	-28.092	20.059	0.271	1.00	51.88
ATOM	493	CB	ILE A 771	-28.352	23.196	1.491	1.00	49.76
ATOM	494	CG1	ILE A 771	-29.258	24.175	2.249	1.00	51.25
ATOM	495	CG2	ILE A 771	-28.509	23.394	-0.006	1.00	48.11
ATOM	496	CD1	ILE A 771	-30.729	24.104	1.846	1.00	52.39
ATOM	497	N	MET A 772	-26.479	20.830	1.616	1.00	49.68
ATOM	498	CA	MET A 772	-25.469	19.976	1.023	1.00	49.48
ATOM	499	C	MET A 772	-25.925	18.544	1.041	1.00	49.90
ATOM	500	O	MET A 772	-25.504	17.748	0.216	1.00	53.68
ATOM	501	CB	MET A 772	-24.152	20.078	1.784	1.00	50.02
ATOM	502	CG	MET A 772	-23.670	21.485	1.974	1.00	50.14
ATOM	503	SD	MET A 772	-22.079	21.532	2.743	1.00	51.82
ATOM	504	CE	MET A 772	-21.416	23.034	1.966	1.00	54.26
ATOM	505	N	ALA A 773	-26.797	18.210	1.975	1.00	49.25
ATOM	506	CA	ALA A 773	-27.265	16.841	2.078	1.00	49.85
ATOM	507	C	ALA A 773	-28.569	16.559	1.339	1.00	49.63
ATOM	508	O	ALA A 773	-28.963	15.405	1.189	1.00	49.98
ATOM	509	CB	ALA A 773	-27.403	16.467	3.554	1.00	50.21
ATOM	510	N	SER A 774	-29.243	17.597	0.867	1.00	50.09
ATOM	511	CA	SER A 774	-30.507	17.385	0.172	1.00	51.17
ATOM	512	C	SER A 774	-30.366	17.304	-1.333	1.00	50.49
ATOM	513	O	SER A 774	-31.325	16.996	-2.027	1.00	53.51
ATOM	514	CB	SER A 774	-31.503	18.496	0.514	1.00	50.00
ATOM	515	OG	SER A 774	-31.733	18.568	1.903	1.00	53.58
ATOM	516	N	MET A 775	-29.181	17.578	-1.850	1.00	51.19
ATOM	517	CA	MET A 775	-28.991	17.536	-3.296	1.00	51.57
ATOM	518	C	MET A 775	-29.005	16.115	-3.879	1.00	50.46
ATOM	519	O	MET A 775	-28.128	15.298	-3.603	1.00	49.82
ATOM	520	CB	MET A 775	-27.701	18.277	-3.657	1.00	52.20
ATOM	521	CG	MET A 775	-27.711	19.720	-3.185	1.00	52.73
ATOM	522	SD	MET A 775	-29.349	20.470	-3.403	1.00	58.26
ATOM	523	CE	MET A 775	-29.044	21.567	-4.684	1.00	55.94
ATOM	524	N	ASP A 776	-30.022	15.836	-4.688	1.00	49.69
ATOM	525	CA	ASP A 776	-30.190	14.532	-5.309	1.00	47.92
ATOM	526	C	ASP A 776	-30.278	14.653	-6.819	1.00	46.24
ATOM	527	O	ASP A 776	-31.354	14.609	-7.411	1.00	43.09

ATOM	528	CB	ASP A 776	-31.442	13.853	-4.762	1.00	51.21
ATOM	529	CG	ASP A 776	-31.736	12.519	-5.434	1.00	54.67
ATOM	530	OD1	ASP A 776	-30.795	11.880	-5.970	1.00	54.64
ATOM	531	OD2	ASP A 776	-32.919	12.105	-5.407	1.00	56.04
ATOM	532	N	HIS A 777	-29.110	14.797	-7.428	1.00	45.15
ATOM	533	CA	HIS A 777	-28.977	14.929	-8.862	1.00	43.19
ATOM	534	C	HIS A 777	-27.687	14.220	-9.231	1.00	44.58
ATOM	535	O	HIS A 777	-26.690	14.324	-8.524	1.00	43.08
ATOM	536	CB	HIS A 777	-28.899	16.401	-9.239	1.00	41.16
ATOM	537	CG	HIS A 777	-28.776	16.641	-10.705	1.00	42.58
ATOM	538	ND1	HIS A 777	-27.601	16.439	-11.397	1.00	42.84
ATOM	539	CD2	HIS A 777	-29.684	17.063	-11.616	1.00	40.33
ATOM	540	CE1	HIS A 777	-27.791	16.728	-12.672	1.00	42.28
ATOM	541	NE2	HIS A 777	-29.047	17.109	-12.830	1.00	41.77
ATOM	542	N	PRO A 778	-27.690	13.484	-10.350	1.00	46.58
ATOM	543	CA	PRO A 778	-26.485	12.763	-10.768	1.00	47.00
ATOM	544	C	PRO A 778	-25.241	13.622	-10.969	1.00	47.70
ATOM	545	O	PRO A 778	-24.113	13.150	-10.775	1.00	48.99
ATOM	546	CB	PRO A 778	-26.930	12.047	-12.046	1.00	45.89
ATOM	547	CG	PRO A 778	-28.008	12.925	-12.575	1.00	45.82
ATOM	548	CD	PRO A 778	-28.773	13.323	-11.338	1.00	45.42
ATOM	549	N	HIS A 779	-25.415	14.890	-11.318	1.00	46.96
ATOM	550	CA	HIS A 779	-24.231	15.701	-11.533	1.00	46.65
ATOM	551	C	HIS A 779	-23.869	16.697	-10.426	1.00	46.00
ATOM	552	O	HIS A 779	-23.195	17.709	-10.640	1.00	43.82
ATOM	553	CB	HIS A 779	-24.318	16.330	-12.922	1.00	45.35
ATOM	554	CG	HIS A 779	-24.475	15.309	-14.009	1.00	46.09
ATOM	555	ND1	HIS A 779	-23.614	14.242	-14.153	1.00	45.56
ATOM	556	CD2	HIS A 779	-25.423	15.156	-14.966	1.00	46.11
ATOM	557	CE1	HIS A 779	-24.025	13.476	-15.148	1.00	44.45
ATOM	558	NE2	HIS A 779	-25.121	14.008	-15.658	1.00	43.34
ATOM	559	N	LEU A 780	-24.307	16.364	-9.222	1.00	45.67
ATOM	560	CA	LEU A 780	-23.985	17.141	-8.038	1.00	48.21
ATOM	561	C	LEU A 780	-23.651	16.086	-6.994	1.00	48.90
ATOM	562	O	LEU A 780	-24.192	14.979	-7.029	1.00	48.98
ATOM	563	CB	LEU A 780	-25.176	17.986	-7.572	1.00	48.42
ATOM	564	CG	LEU A 780	-25.561	19.240	-8.367	1.00	49.03
ATOM	565	CD1	LEU A 780	-26.749	19.886	-7.683	1.00	49.91
ATOM	566	CD2	LEU A 780	-24.408	20.229	-8.432	1.00	47.36
ATOM	567	N	VAL A 781	-22.746	16.398	-6.081	1.00	49.42
ATOM	568	CA	VAL A 781	-22.413	15.420	-5.060	1.00	51.41
ATOM	569	C	VAL A 781	-23.365	15.572	-3.882	1.00	53.85
ATOM	570	O	VAL A 781	-24.077	16.572	-3.762	1.00	53.60
ATOM	571	CB	VAL A 781	-20.969	15.592	-4.564	1.00	49.34
ATOM	572	CG1	VAL A 781	-19.998	15.434	-5.730	1.00	48.15

ATOM	573	CG2 VAL A 781	-20.809	16.942	-3.910	1.00	48.13
ATOM	574	N ARG A 782	-23.386	14.565	-3.018	1.00	57.31
ATOM	575	CA ARG A 782	-24.238	14.593	-1.834	1.00	58.51
ATOM	576	C ARG A 782	-23.429	14.365	-0.560	1.00	57.98
ATOM	577	O ARG A 782	-22.467	13.589	-0.537	1.00	58.11
ATOM	578	CB ARG A 782	-25.343	13.539	-1.943	1.00	59.06
ATOM	579	CG ARG A 782	-26.213	13.466	-0.718	1.00	64.02
ATOM	580	CD ARG A 782	-27.508	12.723	-0.986	1.00	69.63
ATOM	581	NE ARG A 782	-28.200	12.383	0.259	1.00	74.15
ATOM	582	CZ ARG A 782	-29.459	11.955	0.325	1.00	77.34
ATOM	583	NH1 ARG A 782	-30.173	11.821	-0.793	1.00	76.96
ATOM	584	NH2 ARG A 782	-29.999	11.642	1.504	1.00	76.96
ATOM	585	N LEU A 783	-23.817	15.063	0.497	1.00	57.15
ATOM	586	CA LEU A 783	-23.146	14.930	1.776	1.00	57.64
ATOM	587	C LEU A 783	-23.644	13.666	2.470	1.00	57.90
ATOM	588	O LEU A 783	-24.824	13.568	2.811	1.00	58.39
ATOM	589	CB LEU A 783	-23.454	16.147	2.649	1.00	56.99
ATOM	590	CG LEU A 783	-22.693	16.228	3.970	1.00	55.50
ATOM	591	CD1 LEU A 783	-21.204	16.354	3.679	1.00	54.23
ATOM	592	CD2 LEU A 783	-23.189	17.409	4.771	1.00	53.18
ATOM	593	N LEU A 784	-22.755	12.698	2.671	1.00	57.71
ATOM	594	CA LEU A 784	-23.137	11.456	3.341	1.00	57.94
ATOM	595	C LEU A 784	-23.412	11.744	4.809	1.00	57.07
ATOM	596	O LEU A 784	-24.453	11.360	5.353	1.00	57.68
ATOM	597	CB LEU A 784	-22.020	10.416	3.249	1.00	58.52
ATOM	598	CG LEU A 784	-21.758	9.742	1.905	1.00	61.56
ATOM	599	CD1 LEU A 784	-20.493	8.905	2.013	1.00	62.06
ATOM	600	CD2 LEU A 784	-22.950	8.881	1.499	1.00	60.90
ATOM	601	N GLY A 785	-22.472	12.433	5.446	1.00	55.42
ATOM	602	CA GLY A 785	-22.635	12.742	6.848	1.00	54.66
ATOM	603	C GLY A 785	-21.732	13.831	7.380	1.00	54.77
ATOM	604	O GLY A 785	-20.882	14.378	6.677	1.00	53.15
ATOM	605	N VAL A 786	-21.933	14.152	8.649	1.00	55.12
ATOM	606	CA VAL A 786	-21.147	15.177	9.300	1.00	55.18
ATOM	607	C VAL A 786	-20.685	14.649	10.638	1.00	56.04
ATOM	608	O VAL A 786	-21.445	13.976	11.337	1.00	57.35
ATOM	609	CB VAL A 786	-21.983	16.449	9.546	1.00	55.04
ATOM	610	CG1 VAL A 786	-21.148	17.477	10.282	1.00	54.87
ATOM	611	CG2 VAL A 786	-22.471	17.024	8.226	1.00	54.17
ATOM	612	N CYS A 787	-19.432	14.927	10.982	1.00	56.35
ATOM	613	CA CYS A 787	-18.900	14.517	12.274	1.00	56.07
ATOM	614	C CYS A 787	-18.624	15.800	13.043	1.00	55.27
ATOM	615	O CYS A 787	-17.881	16.661	12.579	1.00	53.31
ATOM	616	CB CYS A 787	-17.608	13.718	12.128	1.00	57.61
ATOM	617	SG CYS A 787	-16.830	13.406	13.747	1.00	65.10

ATOM	618	N	LEU A 788	-19.216	15.918	14.222	1.00	56.11
ATOM	619	CA	LEU A 788	-19.062	17.115	15.032	1.00	59.11
ATOM	620	C	LEU A 788	-17.748	17.221	15.816	1.00	62.37
ATOM	621	O	LEU A 788	-17.417	18.290	16.337	1.00	62.61
ATOM	622	CB	LEU A 788	-20.250	17.220	15.987	1.00	56.56
ATOM	623	CG	LEU A 788	-21.630	17.156	15.312	1.00	56.06
ATOM	624	CD1	LEU A 788	-22.708	17.085	16.375	1.00	53.74
ATOM	625	CD2	LEU A 788	-21.851	18.363	14.409	1.00	53.03
ATOM	626	N	SER A 789	-16.991	16.130	15.893	1.00	65.37
ATOM	627	CA	SER A 789	-15.732	16.142	16.641	1.00	68.05
ATOM	628	C	SER A 789	-14.485	15.926	15.791	1.00	68.52
ATOM	629	O	SER A 789	-14.522	15.191	14.805	1.00	69.20
ATOM	630	CB	SER A 789	-15.767	15.078	17.739	1.00	68.67
ATOM	631	OG	SER A 789	-14.457	14.804	18.207	1.00	72.14
ATOM	632	N	PRO A 790	-13.365	16.587	16.154	1.00	69.26
ATOM	633	CA	PRO A 790	-13.256	17.506	17.299	1.00	69.34
ATOM	634	C	PRO A 790	-13.945	18.796	16.889	1.00	69.49
ATOM	635	O	PRO A 790	-14.528	19.515	17.702	1.00	69.32
ATOM	636	CB	PRO A 790	-11.750	17.677	17.458	1.00	68.09
ATOM	637	CG	PRO A 790	-11.257	17.571	16.042	1.00	68.60
ATOM	638	CD	PRO A 790	-12.051	16.403	15.507	1.00	68.85
ATOM	639	N	THR A 791	-13.844	19.065	15.595	1.00	69.16
ATOM	640	CA	THR A 791	-14.461	20.211	14.964	1.00	69.04
ATOM	641	C	THR A 791	-15.183	19.583	13.787	1.00	67.87
ATOM	642	O	THR A 791	-14.762	18.547	13.266	1.00	67.60
ATOM	643	CB	THR A 791	-13.425	21.225	14.447	1.00	70.57
ATOM	644	OG1	THR A 791	-12.586	20.599	13.466	1.00	70.47
ATOM	645	CG2	THR A 791	-12.577	21.743	15.601	1.00	72.25
ATOM	646	N	ILE A 792	-16.275	20.208	13.380	1.00	65.93
ATOM	647	CA	ILE A 792	-17.081	19.707	12.288	1.00	63.52
ATOM	648	C	ILE A 792	-16.307	19.199	11.082	1.00	61.83
ATOM	649	O	ILE A 792	-15.436	19.882	10.551	1.00	60.85
ATOM	650	CB	ILE A 792	-18.091	20.771	11.853	1.00	63.29
ATOM	651	CG1	ILE A 792	-19.080	21.014	13.001	1.00	63.31
ATOM	652	CG2	ILE A 792	-18.790	20.323	10.607	1.00	63.07
ATOM	653	CD1	ILE A 792	-20.228	21.943	12.680	1.00	66.80
ATOM	654	N	GLN A 793	-16.642	17.983	10.666	1.00	61.24
ATOM	655	CA	GLN A 793	-15.999	17.350	9.526	1.00	61.88
ATOM	656	C	GLN A 793	-17.060	16.918	8.522	1.00	60.80
ATOM	657	O	GLN A 793	-18.049	16.272	8.885	1.00	59.39
ATOM	658	CB	GLN A 793	-15.196	16.122	9.968	1.00	63.66
ATOM	659	CG	GLN A 793	-14.283	16.345	11.166	1.00	64.96
ATOM	660	CD	GLN A 793	-13.435	15.123	11.493	1.00	66.60
ATOM	661	OE1	GLN A 793	-13.341	14.190	10.695	1.00	68.16
ATOM	662	NE2	GLN A 793	-12.824	15.119	12.676	1.00	67.52

ATOM	663	N	LEU A 794	-16.841	17.282	7.260	1.00	59.86
ATOM	664	CA	LEU A 794	-17.759	16.946	6.181	1.00	58.57
ATOM	665	C	LEU A 794	-17.334	15.628	5.571	1.00	58.29
ATOM	666	O	LEU A 794	-16.141	15.357	5.441	1.00	58.99
ATOM	667	CB	LEU A 794	-17.747	18.051	5.128	1.00	59.01
ATOM	668	CG	LEU A 794	-18.194	19.414	5.668	1.00	58.65
ATOM	669	CD1	LEU A 794	-18.223	20.438	4.546	1.00	58.33
ATOM	670	CD2	LEU A 794	-19.573	19.276	6.298	1.00	57.68
ATOM	671	N	VAL A 795	-18.311	14.807	5.199	1.00	58.23
ATOM	672	CA	VAL A 795	-18.025	13.493	4.635	1.00	57.20
ATOM	673	C	VAL A 795	-18.868	13.178	3.411	1.00	58.75
ATOM	674	O	VAL A 795	-20.096	13.062	3.490	1.00	57.69
ATOM	675	CB	VAL A 795	-18.257	12.371	5.680	1.00	55.92
ATOM	676	CG1	VAL A 795	-17.708	11.054	5.163	1.00	55.27
ATOM	677	CG2	VAL A 795	-17.604	12.740	7.003	1.00	54.71
ATOM	678	N	THR A 796	-18.184	13.025	2.283	1.00	60.18
ATOM	679	CA	THR A 796	-18.824	12.716	1.018	1.00	63.32
ATOM	680	C	THR A 796	-18.246	11.432	0.461	1.00	64.55
ATOM	681	O	THR A 796	-17.150	11.012	0.838	1.00	64.79
ATOM	682	CB	THR A 796	-18.555	13.799	-0.050	1.00	63.87
ATOM	683	OG1	THR A 796	-18.802	15.099	0.494	1.00	67.06
ATOM	684	CG2	THR A 796	-19.463	13.586	-1.255	1.00	63.95
ATOM	685	N	GLN A 797	-18.991	10.815	-0.445	1.00	65.24
ATOM	686	CA	GLN A 797	-18.522	9.611	-1.100	1.00	66.49
ATOM	687	C	GLN A 797	-17.288	10.093	-1.848	1.00	66.60
ATOM	688	O	GLN A 797	-17.234	11.249	-2.278	1.00	67.28
ATOM	689	CB	GLN A 797	-19.569	9.120	-2.089	1.00	67.59
ATOM	690	CG	GLN A 797	-19.197	7.860	-2.834	1.00	71.35
ATOM	691	CD	GLN A 797	-20.192	7.552	-3.940	1.00	74.61
ATOM	692	OE1	GLN A 797	-21.400	7.453	-3.696	1.00	75.46
ATOM	693	NE2	GLN A 797	-19.693	7.405	-5.166	1.00	74.15
ATOM	694	N	LEU A 798	-16.287	9.234	-1.986	1.00	65.62
ATOM	695	CA	LEU A 798	-15.082	9.631	-2.697	1.00	64.21
ATOM	696	C	LEU A 798	-15.309	9.410	-4.187	1.00	65.69
ATOM	697	O	LEU A 798	-16.029	8.487	-4.582	1.00	66.02
ATOM	698	CB	LEU A 798	-13.888	8.801	-2.228	1.00	61.04
ATOM	699	CG	LEU A 798	-12.541	9.140	-2.860	1.00	60.59
ATOM	700	CD1	LEU A 798	-12.125	10.543	-2.451	1.00	60.17
ATOM	701	CD2	LEU A 798	-11.498	8.133	-2.415	1.00	59.95
ATOM	702	N	MET A 799	-14.722	10.272	-5.013	1.00	65.98
ATOM	703	CA	MET A 799	-14.846	10.135	-6.459	1.00	65.14
ATOM	704	C	MET A 799	-13.531	9.518	-6.915	1.00	64.98
ATOM	705	O	MET A 799	-12.497	10.186	-6.964	1.00	65.11
ATOM	706	CB	MET A 799	-15.076	11.499	-7.123	1.00	64.55
ATOM	707	CG	MET A 799	-16.418	12.140	-6.791	1.00	62.41

ATOM	708	SD	MET A 799	-17.821	11.182	-7.391	1.00	63.79
ATOM	709	CE	MET A 799	-18.278	10.242	-5.953	1.00	63.53
ATOM	710	N	PRO A 800	-13.559	8.221	-7.249	1.00	65.17
ATOM	711	CA	PRO A 800	-12.386	7.464	-7.697	1.00	65.94
ATOM	712	C	PRO A 800	-11.452	8.149	-8.692	1.00	65.86
ATOM	713	O	PRO A 800	-10.254	8.255	-8.443	1.00	64.64
ATOM	714	CB	PRO A 800	-12.999	6.173	-8.257	1.00	66.48
ATOM	715	CG	PRO A 800	-14.391	6.583	-8.651	1.00	65.65
ATOM	716	CD	PRO A 800	-14.792	7.454	-7.496	1.00	65.28
ATOM	717	N	HIS A 801	-11.998	8.614	-9.811	1.00	66.24
ATOM	718	CA	HIS A 801	-11.185	9.251	-10.834	1.00	66.32
ATOM	719	C	HIS A 801	-10.814	10.712	-10.584	1.00	65.51
ATOM	720	O	HIS A 801	-10.474	11.439	-11.512	1.00	66.97
ATOM	721	CB	HIS A 801	-11.861	9.082	-12.195	1.00	68.47
ATOM	722	CG	HIS A 801	-11.882	7.661	-12.679	1.00	70.66
ATOM	723	ND1	HIS A 801	-10.742	6.990	-13.071	1.00	70.46
ATOM	724	CD2	HIS A 801	-12.900	6.773	-12.798	1.00	71.35
ATOM	725	CE1	HIS A 801	-11.057	5.751	-13.407	1.00	70.98
ATOM	726	NE2	HIS A 801	-12.359	5.593	-13.250	1.00	71.18
ATOM	727	N	GLY A 802	-10.885	11.130	-9.324	1.00	64.19
ATOM	728	CA	GLY A 802	-10.503	12.479	-8.929	1.00	61.92
ATOM	729	C	GLY A 802	-11.137	13.756	-9.473	1.00	60.42
ATOM	730	O	GLY A 802	-12.277	13.794	-9.935	1.00	57.28
ATOM	731	N	CYS A 803	-10.355	14.825	-9.374	1.00	59.58
ATOM	732	CA	CYS A 803	-10.755	16.146	-9.812	1.00	58.64
ATOM	733	C	CYS A 803	-10.613	16.269	-11.316	1.00	59.22
ATOM	734	O	CYS A 803	-9.576	15.912	-11.881	1.00	59.33
ATOM	735	CB	CYS A 803	-9.891	17.202	-9.123	1.00	58.78
ATOM	736	SG	CYS A 803	-10.148	17.335	-7.322	1.00	60.97
ATOM	737	N	LEU A 804	-11.660	16.786	-11.955	1.00	58.47
ATOM	738	CA	LEU A 804	-11.686	16.960	-13.399	1.00	57.67
ATOM	739	C	LEU A 804	-10.524	17.792	-13.938	1.00	57.23
ATOM	740	O	LEU A 804	-9.973	17.494	-14.995	1.00	57.42
ATOM	741	CB	LEU A 804	-13.010	17.592	-13.822	1.00	57.36
ATOM	742	CG	LEU A 804	-13.136	17.853	-15.323	1.00	56.02
ATOM	743	CD1	LEU A 804	-12.864	16.566	-16.073	1.00	56.06
ATOM	744	CD2	LEU A 804	-14.522	18.392	-15.646	1.00	56.14
ATOM	745	N	LEU A 805	-10.151	18.839	-13.219	1.00	56.60
ATOM	746	CA	LEU A 805	-9.054	19.674	-13.666	1.00	57.25
ATOM	747	C	LEU A 805	-7.770	18.871	-13.836	1.00	59.50
ATOM	748	O	LEU A 805	-7.068	19.041	-14.826	1.00	61.05
ATOM	749	CB	LEU A 805	-8.821	20.814	-12.681	1.00	54.99
ATOM	750	CG	LEU A 805	-7.600	21.668	-12.995	1.00	52.96
ATOM	751	CD1	LEU A 805	-7.614	22.102	-14.453	1.00	51.15
ATOM	752	CD2	LEU A 805	-7.596	22.863	-12.072	1.00	53.82

ATOM	753	N	GLU A 806	-7.458	18.006	-12.873	1.00	61.71
ATOM	754	CA	GLU A 806	-6.249	17.186	-12.952	1.00	64.25
ATOM	755	C	GLU A 806	-6.435	16.119	-14.027	1.00	63.97
ATOM	756	O	GLU A 806	-5.477	15.676	-14.665	1.00	63.45
ATOM	757	CB	GLU A 806	-5.957	16.495	-11.611	1.00	67.06
ATOM	758	CG	GLU A 806	-5.509	17.425	-10.477	1.00	73.60
ATOM	759	CD	GLU A 806	-5.169	16.666	-9.188	1.00	76.72
ATOM	760	OE1	GLU A 806	-5.484	15.455	-9.105	1.00	77.37
ATOM	761	OE2	GLU A 806	-4.593	17.279	-8.259	1.00	78.10
ATOM	762	N	TYR A 807	-7.684	15.719	-14.228	1.00	63.27
ATOM	763	CA	TYR A 807	-8.015	14.694	-15.203	1.00	63.32
ATOM	764	C	TYR A 807	-7.749	15.098	-16.649	1.00	62.69
ATOM	765	O	TYR A 807	-7.050	14.391	-17.364	1.00	61.57
ATOM	766	CB	TYR A 807	-9.478	14.294	-15.058	1.00	63.62
ATOM	767	CG	TYR A 807	-9.822	13.015	-15.769	1.00	63.28
ATOM	768	CD1	TYR A 807	-9.545	11.778	-15.189	1.00	62.76
ATOM	769	CD2	TYR A 807	-10.436	13.040	-17.017	1.00	63.66
ATOM	770	CE1	TYR A 807	-9.879	10.597	-15.834	1.00	63.41
ATOM	771	CE2	TYR A 807	-10.771	11.867	-17.671	1.00	64.64
ATOM	772	CZ	TYR A 807	-10.494	10.650	-17.074	1.00	64.30
ATOM	773	OH	TYR A 807	-10.854	9.494	-17.719	1.00	65.98
ATOM	774	N	VAL A 808	-8.305	16.223	-17.087	1.00	62.57
ATOM	775	CA	VAL A 808	-8.087	16.644	-18.466	1.00	64.21
ATOM	776	C	VAL A 808	-6.626	16.901	-18.773	1.00	65.63
ATOM	777	O	VAL A 808	-6.238	16.927	-19.933	1.00	66.29
ATOM	778	CB	VAL A 808	-8.865	17.914	-18.831	1.00	61.95
ATOM	779	CG1	VAL A 808	-10.337	17.614	-18.891	1.00	61.31
ATOM	780	CG2	VAL A 808	-8.568	19.003	-17.832	1.00	61.93
ATOM	781	N	HIS A 809	-5.811	17.093	-17.746	1.00	68.17
ATOM	782	CA	HIS A 809	-4.398	17.337	-17.986	1.00	72.57
ATOM	783	C	HIS A 809	-3.690	16.011	-18.246	1.00	72.86
ATOM	784	O	HIS A 809	-3.024	15.834	-19.266	1.00	73.15
ATOM	785	CB	HIS A 809	-3.756	18.034	-16.787	1.00	76.24
ATOM	786	CG	HIS A 809	-2.334	18.446	-17.018	1.00	80.69
ATOM	787	ND1	HIS A 809	-1.989	19.505	-17.831	1.00	82.82
ATOM	788	CD2	HIS A 809	-1.169	17.940	-16.544	1.00	82.57
ATOM	789	CE1	HIS A 809	-0.673	19.635	-17.846	1.00	83.54
ATOM	790	NE2	HIS A 809	-0.152	18.698	-17.074	1.00	83.63
ATOM	791	N	GLU A 810	-3.851	15.077	-17.320	1.00	73.25
ATOM	792	CA	GLU A 810	-3.220	13.776	-17.441	1.00	74.27
ATOM	793	C	GLU A 810	-3.700	12.994	-18.655	1.00	73.56
ATOM	794	O	GLU A 810	-2.901	12.341	-19.331	1.00	73.89
ATOM	795	CB	GLU A 810	-3.466	12.963	-16.172	1.00	76.41
ATOM	796	CG	GLU A 810	-2.767	13.517	-14.941	1.00	80.78
ATOM	797	CD	GLU A 810	-3.185	12.795	-13.670	1.00	84.23

ATOM	798	OE1 GLU A 810	-3.195	11.542	-13.672	1.00	85.68
ATOM	799	OE2 GLU A 810	-3.498	13.479	-12.668	1.00	84.74
ATOM	800	N HIS A 811	-4.998	13.070	-18.937	1.00	72.66
ATOM	801	CA HIS A 811	-5.582	12.346	-20.063	1.00	72.30
ATOM	802	C HIS A 811	-5.823	13.195	-21.303	1.00	72.06
ATOM	803	O HIS A 811	-6.591	12.801	-22.187	1.00	71.12
ATOM	804	CB HIS A 811	-6.899	11.701	-19.638	1.00	73.09
ATOM	805	CG HIS A 811	-6.750	10.700	-18.539	1.00	74.95
ATOM	806	ND1 HIS A 811	-6.018	10.951	-17.399	1.00	76.95
ATOM	807	CD2 HIS A 811	-7.260	9.455	-18.392	1.00	76.68
ATOM	808	CE1 HIS A 811	-6.084	9.904	-16.596	1.00	77.89
ATOM	809	NE2 HIS A 811	-6.833	8.983	-17.175	1.00	77.93
ATOM	810	N LYS A 812	-5.167	14.351	-21.369	1.00	72.19
ATOM	811	CA LYS A 812	-5.321	15.247	-22.510	1.00	72.68
ATOM	812	C LYS A 812	-5.330	14.462	-23.805	1.00	73.33
ATOM	813	O LYS A 812	-6.280	14.518	-24.584	1.00	73.60
ATOM	814	CB LYS A 812	-4.180	16.271	-22.570	1.00	72.21
ATOM	815	CG LYS A 812	-4.116	16.982	-23.917	1.00	71.18
ATOM	816	CD LYS A 812	-3.146	18.148	-23.951	1.00	70.28
ATOM	817	CE LYS A 812	-3.235	18.834	-25.308	1.00	68.88
ATOM	818	NZ LYS A 812	-2.481	20.108	-25.344	1.00	68.31
ATOM	819	N ASP A 813	-4.256	13.717	-24.015	1.00	75.12
ATOM	820	CA ASP A 813	-4.092	12.917	-25.213	1.00	76.11
ATOM	821	C ASP A 813	-5.038	11.712	-25.213	1.00	75.70
ATOM	822	O ASP A 813	-4.692	10.641	-25.697	1.00	75.57
ATOM	823	CB ASP A 813	-2.627	12.469	-25.312	1.00	78.16
ATOM	824	CG ASP A 813	-1.639	13.629	-25.104	1.00	79.48
ATOM	825	OD1 ASP A 813	-1.703	14.618	-25.867	1.00	78.24
ATOM	826	OD2 ASP A 813	-0.795	13.554	-24.176	1.00	81.15
ATOM	827	N ASN A 814	-6.237	11.901	-24.671	1.00	75.59
ATOM	828	CA ASN A 814	-7.232	10.835	-24.609	1.00	75.15
ATOM	829	C ASN A 814	-8.639	11.421	-24.602	1.00	73.09
ATOM	830	O ASN A 814	-9.629	10.690	-24.620	1.00	72.17
ATOM	831	CB ASN A 814	-7.038	10.003	-23.340	1.00	79.73
ATOM	832	CG ASN A 814	-8.095	8.910	-23.182	1.00	83.39
ATOM	833	OD1 ASN A 814	-8.417	8.495	-22.059	1.00	85.44
ATOM	834	ND2 ASN A 814	-8.628	8.429	-24.306	1.00	82.76
ATOM	835	N ILE A 815	-8.725	12.746	-24.575	1.00	70.07
ATOM	836	CA ILE A 815	-10.018	13.414	-24.543	1.00	66.45
ATOM	837	C ILE A 815	-10.548	13.773	-25.923	1.00	64.58
ATOM	838	O ILE A 815	-9.910	14.515	-26.670	1.00	65.16
ATOM	839	CB ILE A 815	-9.940	14.686	-23.701	1.00	66.17
ATOM	840	CG1 ILE A 815	-9.416	14.337	-22.310	1.00	64.41
ATOM	841	CG2 ILE A 815	-11.308	15.341	-23.616	1.00	65.95
ATOM	842	CD1 ILE A 815	-10.283	13.377	-21.576	1.00	64.44

ATOM	843	N	GLY A 816	-11.727	13.244	-26.244	1.00	61.95
ATOM	844	CA	GLY A 816	-12.348	13.502	-27.529	1.00	58.49
ATOM	845	C	GLY A 816	-13.391	14.602	-27.474	1.00	57.57
ATOM	846	O	GLY A 816	-13.798	15.049	-26.400	1.00	56.05
ATOM	847	N	SER A 817	-13.836	15.036	-28.645	1.00	55.76
ATOM	848	CA	SER A 817	-14.814	16.100	-28.723	1.00	54.42
ATOM	849	C	SER A 817	-16.087	15.748	-27.976	1.00	53.51
ATOM	850	O	SER A 817	-16.653	16.588	-27.277	1.00	53.70
ATOM	851	CB	SER A 817	-15.140	16.417	-30.188	1.00	54.21
ATOM	852	OG	SER A 817	-15.754	15.315	-30.830	1.00	53.76
ATOM	853	N	GLN A 818	-16.526	14.503	-28.118	1.00	52.59
ATOM	854	CA	GLN A 818	-17.755	14.046	-27.481	1.00	52.58
ATOM	855	C	GLN A 818	-17.711	14.105	-25.962	1.00	52.52
ATOM	856	O	GLN A 818	-18.606	14.649	-25.316	1.00	53.30
ATOM	857	CB	GLN A 818	-18.071	12.624	-27.929	1.00	52.77
ATOM	858	CG	GLN A 818	-19.386	12.096	-27.396	1.00	55.94
ATOM	859	CD	GLN A 818	-19.734	10.728	-27.960	1.00	57.95
ATOM	860	OE1	GLN A 818	-19.015	9.749	-27.741	1.00	55.96
ATOM	861	NE2	GLN A 818	-20.841	10.657	-28.694	1.00	58.90
ATOM	862	N	LEU A 819	-16.663	13.535	-25.392	1.00	52.33
ATOM	863	CA	LEU A 819	-16.487	13.519	-23.951	1.00	53.05
ATOM	864	C	LEU A 819	-16.530	14.955	-23.374	1.00	52.97
ATOM	865	O	LEU A 819	-17.199	15.211	-22.372	1.00	51.99
ATOM	866	CB	LEU A 819	-15.147	12.846	-23.641	1.00	55.20
ATOM	867	CG	LEU A 819	-14.857	12.305	-22.246	1.00	58.07
ATOM	868	CD1	LEU A 819	-15.883	11.248	-21.893	1.00	59.70
ATOM	869	CD2	LEU A 819	-13.454	11.722	-22.216	1.00	57.59
ATOM	870	N	LEU A 820	-15.823	15.881	-24.024	1.00	51.18
ATOM	871	CA	LEU A 820	-15.761	17.274	-23.592	1.00	49.17
ATOM	872	C	LEU A 820	-17.089	18.021	-23.663	1.00	48.89
ATOM	873	O	LEU A 820	-17.395	18.820	-22.776	1.00	48.95
ATOM	874	CB	LEU A 820	-14.725	18.041	-24.415	1.00	48.36
ATOM	875	CG	LEU A 820	-13.252	17.791	-24.106	1.00	47.62
ATOM	876	CD1	LEU A 820	-12.411	18.277	-25.275	1.00	47.48
ATOM	877	CD2	LEU A 820	-12.859	18.485	-22.813	1.00	46.35
ATOM	878	N	LEU A 821	-17.867	17.794	-24.719	1.00	47.18
ATOM	879	CA	LEU A 821	-19.158	18.470	-24.845	1.00	45.74
ATOM	880	C	LEU A 821	-20.174	17.912	-23.858	1.00	44.93
ATOM	881	O	LEU A 821	-21.035	18.636	-23.366	1.00	44.43
ATOM	882	CB	LEU A 821	-19.699	18.350	-26.269	1.00	43.56
ATOM	883	CG	LEU A 821	-19.043	19.245	-27.324	1.00	44.32
ATOM	884	CD1	LEU A 821	-19.595	18.904	-28.686	1.00	42.72
ATOM	885	CD2	LEU A 821	-19.299	20.706	-27.015	1.00	41.61
ATOM	886	N	ASN A 822	-20.074	16.620	-23.575	1.00	45.14
ATOM	887	CA	ASN A 822	-20.978	15.992	-22.630	1.00	46.84

ATOM	888	C	ASN A 822	-20.710	16.514	-21.216	1.00	46.44
ATOM	889	O	ASN A 822	-21.629	16.712	-20.429	1.00	47.65
ATOM	890	CB	ASN A 822	-20.803	14.480	-22.683	1.00	50.43
ATOM	891	CG	ASN A 822	-21.407	13.874	-23.930	1.00	53.27
ATOM	892	OD1	ASN A 822	-22.624	13.914	-24.127	1.00	55.44
ATOM	893	ND2	ASN A 822	-20.564	13.310	-24.782	1.00	55.67
ATOM	894	N	TRP A 823	-19.448	16.736	-20.886	1.00	44.44
ATOM	895	CA	TRP A 823	-19.126	17.265	-19.571	1.00	44.31
ATOM	896	C	TRP A 823	-19.734	18.662	-19.418	1.00	42.62
ATOM	897	O	TRP A 823	-20.172	19.051	-18.331	1.00	41.36
ATOM	898	CB	TRP A 823	-17.609	17.334	-19.376	1.00	44.91
ATOM	899	CG	TRP A 823	-16.949	15.987	-19.186	1.00	46.37
ATOM	900	CD1	TRP A 823	-17.551	14.826	-18.785	1.00	45.40
ATOM	901	CD2	TRP A 823	-15.552	15.689	-19.318	1.00	46.95
ATOM	902	NE1	TRP A 823	-16.615	13.828	-18.656	1.00	46.44
ATOM	903	CE2	TRP A 823	-15.380	14.328	-18.977	1.00	46.59
ATOM	904	CE3	TRP A 823	-14.425	16.441	-19.693	1.00	49.03
ATOM	905	CZ2	TRP A 823	-14.128	13.699	-18.998	1.00	46.68
ATOM	906	CZ3	TRP A 823	-13.169	15.808	-19.715	1.00	50.33
ATOM	907	CH2	TRP A 823	-13.038	14.451	-19.368	1.00	47.90
ATOM	908	N	CYS A 824	-19.773	19.407	-20.514	1.00	40.45
ATOM	909	CA	CYS A 824	-20.329	20.746	-20.489	1.00	42.24
ATOM	910	C	CYS A 824	-21.799	20.690	-20.146	1.00	43.66
ATOM	911	O	CYS A 824	-22.309	21.548	-19.426	1.00	43.87
ATOM	912	CB	CYS A 824	-20.138	21.439	-21.836	1.00	43.69
ATOM	913	SG	CYS A 824	-18.428	21.910	-22.159	1.00	44.22
ATOM	914	N	VAL A 825	-22.472	19.668	-20.667	1.00	45.00
ATOM	915	CA	VAL A 825	-23.896	19.459	-20.425	1.00	42.03
ATOM	916	C	VAL A 825	-24.109	19.061	-18.973	1.00	42.11
ATOM	917	O	VAL A 825	-24.921	19.653	-18.254	1.00	40.65
ATOM	918	CB	VAL A 825	-24.441	18.353	-21.337	1.00	41.91
ATOM	919	CG1	VAL A 825	-25.865	17.993	-20.940	1.00	41.30
ATOM	920	CG2	VAL A 825	-24.392	18.821	-22.788	1.00	41.84
ATOM	921	N	GLN A 826	-23.362	18.053	-18.543	1.00	42.60
ATOM	922	CA	GLN A 826	-23.460	17.573	-17.175	1.00	42.94
ATOM	923	C	GLN A 826	-23.232	18.697	-16.182	1.00	40.98
ATOM	924	O	GLN A 826	-24.012	18.858	-15.253	1.00	41.31
ATOM	925	CB	GLN A 826	-22.475	16.428	-16.965	1.00	43.82
ATOM	926	CG	GLN A 826	-22.954	15.187	-17.689	1.00	46.63
ATOM	927	CD	GLN A 826	-21.996	14.029	-17.594	1.00	47.66
ATOM	928	OE1	GLN A 826	-21.205	13.938	-16.660	1.00	47.25
ATOM	929	NE2	GLN A 826	-22.077	13.119	-18.559	1.00	49.33
ATOM	930	N	ILE A 827	-22.180	19.485	-16.381	1.00	39.59
ATOM	931	CA	ILE A 827	-21.920	20.598	-15.479	1.00	38.36
ATOM	932	C	ILE A 827	-23.090	21.596	-15.527	1.00	39.97

ATOM	933	O	ILE A 827	-23.643	21.967	-14.485	1.00	41.14
ATOM	934	CB	ILE A 827	-20.607	21.329	-15.834	1.00	36.75
ATOM	935	CG1	ILE A 827	-19.449	20.320	-15.852	1.00	36.42
ATOM	936	CG2	ILE A 827	-20.335	22.436	-14.816	1.00	32.91
ATOM	937	CD1	ILE A 827	-18.064	20.930	-15.996	1.00	33.58
ATOM	938	N	ALA A 828	-23.479	22.016	-16.727	1.00	38.03
ATOM	939	CA	ALA A 828	-24.581	22.957	-16.867	1.00	38.98
ATOM	940	C	ALA A 828	-25.848	22.407	-16.203	1.00	41.61
ATOM	941	O	ALA A 828	-26.562	23.133	-15.514	1.00	41.11
ATOM	942	CB	ALA A 828	-24.835	23.253	-18.339	1.00	37.80
ATOM	943	N	LYS A 829	-26.120	21.118	-16.398	1.00	43.40
ATOM	944	CA	LYS A 829	-27.302	20.502	-15.803	1.00	43.58
ATOM	945	C	LYS A 829	-27.298	20.557	-14.277	1.00	45.12
ATOM	946	O	LYS A 829	-28.319	20.849	-13.666	1.00	45.69
ATOM	947	CB	LYS A 829	-27.444	19.055	-16.272	1.00	43.15
ATOM	948	CG	LYS A 829	-28.315	18.892	-17.508	1.00	43.32
ATOM	949	CD	LYS A 829	-28.403	17.433	-17.912	1.00	47.16
ATOM	950	CE	LYS A 829	-29.243	17.228	-19.164	1.00	49.43
ATOM	951	NZ	LYS A 829	-29.209	15.792	-19.577	1.00	50.93
ATOM	952	N	GLY A 830	-26.159	20.268	-13.661	1.00	46.16
ATOM	953	CA	GLY A 830	-26.090	20.327	-12.214	1.00	46.02
ATOM	954	C	GLY A 830	-26.349	21.744	-11.721	1.00	46.34
ATOM	955	O	GLY A 830	-27.060	21.948	-10.729	1.00	46.09
ATOM	956	N	MET A 831	-25.770	22.731	-12.399	1.00	45.04
ATOM	957	CA	MET A 831	-25.982	24.119	-11.999	1.00	46.30
ATOM	958	C	MET A 831	-27.484	24.407	-12.125	1.00	47.00
ATOM	959	O	MET A 831	-28.076	25.117	-11.306	1.00	45.79
ATOM	960	CB	MET A 831	-25.173	25.069	-12.896	1.00	43.99
ATOM	961	CG	MET A 831	-23.675	24.923	-12.748	1.00	40.18
ATOM	962	SD	MET A 831	-23.169	25.141	-11.023	1.00	41.93
ATOM	963	CE	MET A 831	-23.711	26.840	-10.757	1.00	41.68
ATOM	964	N	MET A 832	-28.084	23.819	-13.156	1.00	46.35
ATOM	965	CA	MET A 832	-29.503	23.954	-13.444	1.00	48.31
ATOM	966	C	MET A 832	-30.330	23.517	-12.236	1.00	47.54
ATOM	967	O	MET A 832	-31.274	24.197	-11.828	1.00	49.03
ATOM	968	CB	MET A 832	-29.835	23.080	-14.648	1.00	52.33
ATOM	969	CG	MET A 832	-31.143	23.377	-15.345	1.00	57.13
ATOM	970	SD	MET A 832	-31.249	22.334	-16.823	1.00	62.53
ATOM	971	CE	MET A 832	-30.102	23.157	-17.832	1.00	58.95
ATOM	972	N	TYR A 833	-29.963	22.375	-11.670	1.00	45.22
ATOM	973	CA	TYR A 833	-30.637	21.832	-10.508	1.00	43.85
ATOM	974	C	TYR A 833	-30.446	22.781	-9.332	1.00	45.57
ATOM	975	O	TYR A 833	-31.382	23.033	-8.571	1.00	44.47
ATOM	976	CB	TYR A 833	-30.041	20.475	-10.161	1.00	42.10
ATOM	977	CG	TYR A 833	-30.709	19.759	-9.006	1.00	42.47

ATOM	978	CD1 TYR A 833	-31.781	18.877	-9.223	1.00	41.47
ATOM	979	CD2 TYR A 833	-30.226	19.902	-7.702	1.00	39.44
ATOM	980	CE1 TYR A 833	-32.344	18.143	-8.165	1.00	37.67
ATOM	981	CE2 TYR A 833	-30.784	19.184	-6.639	1.00	39.15
ATOM	982	CZ TYR A 833	-31.837	18.306	-6.877	1.00	38.87
ATOM	983	OH TYR A 833	-32.378	17.600	-5.827	1.00	38.16
ATOM	984	N LEU A 834	-29.232	23.304	-9.176	1.00	45.55
ATOM	985	CA LEU A 834	-28.958	24.225	-8.072	1.00	46.56
ATOM	986	C LEU A 834	-29.800	25.496	-8.168	1.00	45.77
ATOM	987	O LEU A 834	-30.432	25.894	-7.199	1.00	45.06
ATOM	988	CB LEU A 834	-27.468	24.601	-8.022	1.00	46.73
ATOM	989	CG LEU A 834	-26.445	23.528	-7.609	1.00	47.94
ATOM	990	CD1 LEU A 834	-25.044	24.081	-7.736	1.00	45.98
ATOM	991	CD2 LEU A 834	-26.679	23.094	-6.184	1.00	46.82
ATOM	992	N GLU A 835	-29.803	26.126	-9.337	1.00	46.46
ATOM	993	CA GLU A 835	-30.561	27.359	-9.559	1.00	48.02
ATOM	994	C GLU A 835	-32.059	27.172	-9.298	1.00	48.70
ATOM	995	O GLU A 835	-32.749	28.101	-8.872	1.00	44.97
ATOM	996	CB GLU A 835	-30.357	27.835	-10.997	1.00	48.88
ATOM	997	CG GLU A 835	-30.994	29.167	-11.320	1.00	51.38
ATOM	998	CD GLU A 835	-30.899	29.497	-12.791	1.00	55.29
ATOM	999	OE1 GLU A 835	-31.031	30.682	-13.160	1.00	61.79
ATOM	1000	OE2 GLU A 835	-30.699	28.562	-13.591	1.00	59.22
ATOM	1001	N GLU A 836	-32.547	25.966	-9.585	1.00	49.61
ATOM	1002	CA GLU A 836	-33.941	25.609	-9.393	1.00	51.33
ATOM	1003	C GLU A 836	-34.251	25.644	-7.893	1.00	52.42
ATOM	1004	O GLU A 836	-35.376	25.933	-7.476	1.00	53.59
ATOM	1005	CB GLU A 836	-34.172	24.213	-9.976	1.00	53.43
ATOM	1006	CG GLU A 836	-35.554	23.632	-9.752	1.00	61.91
ATOM	1007	CD GLU A 836	-35.694	22.222	-10.322	1.00	68.30
ATOM	1008	OE1 GLU A 836	-34.777	21.393	-10.103	1.00	70.37
ATOM	1009	OE2 GLU A 836	-36.723	21.938	-10.984	1.00	72.73
ATOM	1010	N ARG A 837	-33.232	25.366	-7.089	1.00	52.07
ATOM	1011	CA ARG A 837	-33.342	25.363	-5.632	1.00	53.28
ATOM	1012	C ARG A 837	-32.980	26.731	-5.018	1.00	53.42
ATOM	1013	O ARG A 837	-32.909	26.859	-3.800	1.00	52.59
ATOM	1014	CB ARG A 837	-32.401	24.300	-5.041	1.00	54.24
ATOM	1015	CG ARG A 837	-32.654	22.870	-5.507	1.00	54.61
ATOM	1016	CD ARG A 837	-33.996	22.419	-5.013	1.00	54.07
ATOM	1017	NE ARG A 837	-34.338	21.032	-5.316	1.00	54.63
ATOM	1018	CZ ARG A 837	-34.342	20.493	-6.529	1.00	53.35
ATOM	1019	NH1 ARG A 837	-33.993	21.207	-7.590	1.00	54.44
ATOM	1020	NH2 ARG A 837	-34.777	19.250	-6.687	1.00	52.90
ATOM	1021	N ARG A 838	-32.739	27.734	-5.862	1.00	54.60
ATOM	1022	CA ARG A 838	-32.366	29.084	-5.417	1.00	56.39

ATOM	1023	C	ARG A 838	-30.963	29.097	-4.789	1.00	55.44
ATOM	1024	O	ARG A 838	-30.669	29.912	-3.911	1.00	55.30
ATOM	1025	CB	ARG A 838	-33.378	29.619	-4.393	1.00	60.89
ATOM	1026	CG	ARG A 838	-34.852	29.577	-4.822	1.00	68.36
ATOM	1027	CD	ARG A 838	-35.206	30.654	-5.846	1.00	73.13
ATOM	1028	NE	ARG A 838	-36.650	30.723	-6.105	1.00	77.28
ATOM	1029	CZ	ARG A 838	-37.320	29.908	-6.920	1.00	78.68
ATOM	1030	NH1	ARG A 838	-38.629	30.061	-7.074	1.00	78.70
ATOM	1031	NH2	ARG A 838	-36.686	28.951	-7.592	1.00	78.88
ATOM	1032	N	LEU A 839	-30.091	28.207	-5.253	1.00	52.78
ATOM	1033	CA	LEU A 839	-28.744	28.115	-4.703	1.00	50.80
ATOM	1034	C	LEU A 839	-27.635	28.587	-5.644	1.00	49.61
ATOM	1035	O	LEU A 839	-27.558	28.180	-6.801	1.00	51.46
ATOM	1036	CB	LEU A 839	-28.472	26.674	-4.275	1.00	51.33
ATOM	1037	CG	LEU A 839	-29.535	26.036	-3.370	1.00	52.40
ATOM	1038	CD1	LEU A 839	-29.216	24.548	-3.176	1.00	51.01
ATOM	1039	CD2	LEU A 839	-29.593	26.778	-2.026	1.00	50.05
ATOM	1040	N	VAL A 840	-26.773	29.455	-5.138	1.00	46.94
ATOM	1041	CA	VAL A 840	-25.671	29.958	-5.933	1.00	45.16
ATOM	1042	C	VAL A 840	-24.388	29.267	-5.497	1.00	45.42
ATOM	1043	O	VAL A 840	-24.124	29.147	-4.309	1.00	45.89
ATOM	1044	CB	VAL A 840	-25.515	31.472	-5.750	1.00	44.00
ATOM	1045	CG1	VAL A 840	-24.412	32.005	-6.673	1.00	39.24
ATOM	1046	CG2	VAL A 840	-26.846	32.150	-6.036	1.00	42.54
ATOM	1047	N	HIS A 841	-23.588	28.805	-6.450	1.00	45.68
ATOM	1048	CA	HIS A 841	-22.343	28.137	-6.097	1.00	45.32
ATOM	1049	C	HIS A 841	-21.307	29.133	-5.578	1.00	45.51
ATOM	1050	O	HIS A 841	-20.752	28.958	-4.496	1.00	46.26
ATOM	1051	CB	HIS A 841	-21.778	27.396	-7.305	1.00	44.31
ATOM	1052	CG	HIS A 841	-20.707	26.410	-6.956	1.00	43.65
ATOM	1053	ND1	HIS A 841	-19.583	26.755	-6.240	1.00	41.64
ATOM	1054	CD2	HIS A 841	-20.592	25.088	-7.222	1.00	43.78
ATOM	1055	CE1	HIS A 841	-18.821	25.689	-6.080	1.00	42.85
ATOM	1056	NE2	HIS A 841	-19.410	24.664	-6.667	1.00	43.25
ATOM	1057	N	ARG A 842	-21.050	30.173	-6.363	1.00	46.38
ATOM	1058	CA	ARG A 842	-20.086	31.213	-6.009	1.00	48.44
ATOM	1059	C	ARG A 842	-18.643	30.854	-6.304	1.00	47.29
ATOM	1060	O	ARG A 842	-17.800	31.737	-6.407	1.00	47.23
ATOM	1061	CB	ARG A 842	-20.199	31.600	-4.533	1.00	50.08
ATOM	1062	CG	ARG A 842	-21.388	32.452	-4.221	1.00	55.04
ATOM	1063	CD	ARG A 842	-21.436	32.802	-2.759	1.00	59.44
ATOM	1064	NE	ARG A 842	-22.511	33.746	-2.470	1.00	62.17
ATOM	1065	CZ	ARG A 842	-22.698	34.317	-1.286	1.00	63.69
ATOM	1066	NH1	ARG A 842	-21.881	34.037	-0.282	1.00	65.35
ATOM	1067	NH2	ARG A 842	-23.699	35.166	-1.106	1.00	64.62

ATOM	1068	N	ASP A 843	-18.349	29.568	-6.440	1.00	46.08
ATOM	1069	CA	ASP A 843	-16.978	29.160	-6.714	1.00	44.50
ATOM	1070	C	ASP A 843	-16.877	27.969	-7.671	1.00	42.28
ATOM	1071	O	ASP A 843	-16.163	26.997	-7.412	1.00	39.78
ATOM	1072	CB	ASP A 843	-16.260	28.857	-5.393	1.00	44.95
ATOM	1073	CG	ASP A 843	-14.794	28.536	-5.588	1.00	45.84
ATOM	1074	OD1	ASP A 843	-14.145	29.230	-6.403	1.00	47.66
ATOM	1075	OD2	ASP A 843	-14.293	27.600	-4.925	1.00	44.46
ATOM	1076	N	LEU A 844	-17.601	28.052	-8.781	1.00	39.91
ATOM	1077	CA	LEU A 844	-17.569	26.997	-9.774	1.00	38.68
ATOM	1078	C	LEU A 844	-16.267	27.143	-10.579	1.00	39.36
ATOM	1079	O	LEU A 844	-15.909	28.244	-11.012	1.00	36.39
ATOM	1080	CB	LEU A 844	-18.787	27.110	-10.690	1.00	37.44
ATOM	1081	CG	LEU A 844	-18.818	26.190	-11.918	1.00	35.03
ATOM	1082	CD1	LEU A 844	-18.793	24.735	-11.502	1.00	33.46
ATOM	1083	CD2	LEU A 844	-20.061	26.486	-12.710	1.00	33.77
ATOM	1084	N	ALA A 845	-15.554	26.035	-10.749	1.00	38.08
ATOM	1085	CA	ALA A 845	-14.294	26.041	-11.481	1.00	41.74
ATOM	1086	C	ALA A 845	-13.890	24.602	-11.766	1.00	43.66
ATOM	1087	O	ALA A 845	-14.272	23.692	-11.029	1.00	45.06
ATOM	1088	CB	ALA A 845	-13.209	26.740	-10.653	1.00	41.01
ATOM	1089	N	ALA A 846	-13.128	24.388	-12.832	1.00	45.09
ATOM	1090	CA	ALA A 846	-12.706	23.034	-13.183	1.00	46.69
ATOM	1091	C	ALA A 846	-12.244	22.297	-11.933	1.00	47.45
ATOM	1092	O	ALA A 846	-12.454	21.094	-11.789	1.00	49.65
ATOM	1093	CB	ALA A 846	-11.591	23.083	-14.208	1.00	45.74
ATOM	1094	N	ARG A 847	-11.632	23.047	-11.027	1.00	49.09
ATOM	1095	CA	ARG A 847	-11.117	22.527	-9.759	1.00	50.53
ATOM	1096	C	ARG A 847	-12.175	21.893	-8.858	1.00	50.50
ATOM	1097	O	ARG A 847	-11.872	20.978	-8.100	1.00	51.14
ATOM	1098	CB	ARG A 847	-10.421	23.664	-9.015	1.00	52.11
ATOM	1099	CG	ARG A 847	-10.116	23.414	-7.567	1.00	55.22
ATOM	1100	CD	ARG A 847	-9.438	24.635	-7.002	1.00	54.87
ATOM	1101	NE	ARG A 847	-10.266	25.814	-7.214	1.00	59.60
ATOM	1102	CZ	ARG A 847	-11.222	26.221	-6.381	1.00	62.29
ATOM	1103	NH1	ARG A 847	-11.468	25.543	-5.262	1.00	63.16
ATOM	1104	NH2	ARG A 847	-11.942	27.298	-6.676	1.00	61.26
ATOM	1105	N	ASN A 848	-13.412	22.374	-8.931	1.00	49.43
ATOM	1106	CA	ASN A 848	-14.469	21.819	-8.099	1.00	47.44
ATOM	1107	C	ASN A 848	-15.438	20.903	-8.840	1.00	48.04
ATOM	1108	O	ASN A 848	-16.612	20.784	-8.472	1.00	48.54
ATOM	1109	CB	ASN A 848	-15.236	22.934	-7.384	1.00	45.48
ATOM	1110	CG	ASN A 848	-14.397	23.628	-6.337	1.00	45.91
ATOM	1111	OD1	ASN A 848	-13.754	22.979	-5.521	1.00	50.11
ATOM	1112	ND2	ASN A 848	-14.406	24.950	-6.347	1.00	43.85

ATOM	1113	N	VAL A 849	-14.951	20.265	-9.897	1.00	46.96
ATOM	1114	CA	VAL A 849	-15.771	19.318	-10.637	1.00	47.48
ATOM	1115	C	VAL A 849	-15.026	17.994	-10.477	1.00	48.51
ATOM	1116	O	VAL A 849	-13.826	17.913	-10.729	1.00	49.29
ATOM	1117	CB	VAL A 849	-15.896	19.688	-12.145	1.00	47.07
ATOM	1118	CG1	VAL A 849	-16.754	18.653	-12.871	1.00	47.56
ATOM	1119	CG2	VAL A 849	-16.517	21.065	-12.298	1.00	45.99
ATOM	1120	N	LEU A 850	-15.730	16.965	-10.026	1.00	48.67
ATOM	1121	CA	LEU A 850	-15.109	15.667	-9.813	1.00	47.31
ATOM	1122	C	LEU A 850	-15.554	14.634	-10.855	1.00	48.46
ATOM	1123	O	LEU A 850	-16.641	14.733	-11.430	1.00	47.00
ATOM	1124	CB	LEU A 850	-15.437	15.165	-8.402	1.00	43.85
ATOM	1125	CG	LEU A 850	-15.177	16.144	-7.255	1.00	42.97
ATOM	1126	CD1	LEU A 850	-15.709	15.561	-5.970	1.00	40.25
ATOM	1127	CD2	LEU A 850	-13.694	16.439	-7.137	1.00	42.26
ATOM	1128	N	VAL A 851	-14.701	13.638	-11.082	1.00	50.16
ATOM	1129	CA	VAL A 851	-14.985	12.588	-12.045	1.00	51.71
ATOM	1130	C	VAL A 851	-15.343	11.257	-11.371	1.00	54.08
ATOM	1131	O	VAL A 851	-14.485	10.615	-10.757	1.00	53.24
ATOM	1132	CB	VAL A 851	-13.772	12.355	-12.963	1.00	51.18
ATOM	1133	CG1	VAL A 851	-14.208	11.572	-14.195	1.00	53.03
ATOM	1134	CG2	VAL A 851	-13.136	13.683	-13.351	1.00	48.08
ATOM	1135	N	LYS A 852	-16.610	10.854	-11.473	1.00	56.51
ATOM	1136	CA	LYS A 852	-17.060	9.581	-10.897	1.00	60.15
ATOM	1137	C	LYS A 852	-16.552	8.520	-11.863	1.00	62.24
ATOM	1138	O	LYS A 852	-16.067	7.461	-11.464	1.00	64.74
ATOM	1139	CB	LYS A 852	-18.584	9.524	-10.829	1.00	60.47
ATOM	1140	CG	LYS A 852	-19.156	8.246	-10.229	1.00	61.94
ATOM	1141	CD	LYS A 852	-20.672	8.239	-10.404	1.00	66.23
ATOM	1142	CE	LYS A 852	-21.375	7.079	-9.703	1.00	66.46
ATOM	1143	NZ	LYS A 852	-22.871	7.181	-9.873	1.00	66.94
ATOM	1144	N	SER A 853	-16.671	8.837	-13.145	1.00	62.50
ATOM	1145	CA	SER A 853	-16.212	7.989	-14.233	1.00	62.66
ATOM	1146	C	SER A 853	-16.012	8.924	-15.431	1.00	61.67
ATOM	1147	O	SER A 853	-16.624	9.988	-15.499	1.00	60.83
ATOM	1148	CB	SER A 853	-17.233	6.882	-14.536	1.00	63.56
ATOM	1149	OG	SER A 853	-18.560	7.374	-14.594	1.00	66.67
ATOM	1150	N	PRO A 854	-15.134	8.551	-16.373	1.00	60.36
ATOM	1151	CA	PRO A 854	-14.849	9.364	-17.558	1.00	59.12
ATOM	1152	C	PRO A 854	-16.065	10.032	-18.179	1.00	57.95
ATOM	1153	O	PRO A 854	-16.003	11.182	-18.610	1.00	56.93
ATOM	1154	CB	PRO A 854	-14.188	8.365	-18.500	1.00	60.62
ATOM	1155	CG	PRO A 854	-13.413	7.508	-17.550	1.00	60.96
ATOM	1156	CD	PRO A 854	-14.418	7.263	-16.443	1.00	61.47
ATOM	1157	N	ALA A 855	-17.175	9.313	-18.210	1.00	56.59

ATOM	1158	CA	ALA A 855	-18.391	9.842	-18.801	1.00	56.60
ATOM	1159	C	ALA A 855	-19.414	10.316	-17.762	1.00	55.94
ATOM	1160	O	ALA A 855	-20.605	10.376	-18.046	1.00	55.12
ATOM	1161	CB	ALA A 855	-19.009	8.779	-19.699	1.00	57.53
ATOM	1162	N	HIS A 856	-18.954	10.674	-16.568	1.00	55.98
ATOM	1163	CA	HIS A 856	-19.869	11.100	-15.513	1.00	53.27
ATOM	1164	C	HIS A 856	-19.169	11.954	-14.460	1.00	51.77
ATOM	1165	O	HIS A 856	-18.433	11.446	-13.618	1.00	53.22
ATOM	1166	CB	HIS A 856	-20.477	9.858	-14.858	1.00	54.21
ATOM	1167	CG	HIS A 856	-21.564	10.146	-13.868	1.00	56.69
ATOM	1168	ND1	HIS A 856	-22.263	9.145	-13.227	1.00	56.79
ATOM	1169	CD2	HIS A 856	-22.080	11.312	-13.416	1.00	55.96
ATOM	1170	CE1	HIS A 856	-23.163	9.681	-12.425	1.00	57.20
ATOM	1171	NE2	HIS A 856	-23.073	10.995	-12.521	1.00	57.31
ATOM	1172	N	VAL A 857	-19.397	13.259	-14.514	1.00	49.26
ATOM	1173	CA	VAL A 857	-18.794	14.161	-13.550	1.00	46.76
ATOM	1174	C	VAL A 857	-19.864	14.686	-12.589	1.00	46.86
ATOM	1175	O	VAL A 857	-21.065	14.579	-12.861	1.00	46.96
ATOM	1176	CB	VAL A 857	-18.058	15.343	-14.260	1.00	46.02
ATOM	1177	CG1	VAL A 857	-16.777	14.830	-14.928	1.00	41.78
ATOM	1178	CG2	VAL A 857	-18.961	15.992	-15.285	1.00	38.84
ATOM	1179	N	LYS A 858	-19.422	15.226	-11.458	1.00	45.57
ATOM	1180	CA	LYS A 858	-20.322	15.767	-10.437	1.00	45.68
ATOM	1181	C	LYS A 858	-19.765	17.090	-9.923	1.00	45.10
ATOM	1182	O	LYS A 858	-18.552	17.220	-9.727	1.00	43.10
ATOM	1183	CB	LYS A 858	-20.442	14.804	-9.242	1.00	46.28
ATOM	1184	CG	LYS A 858	-21.257	13.521	-9.451	1.00	45.72
ATOM	1185	CD	LYS A 858	-21.160	12.646	-8.184	1.00	44.10
ATOM	1186	CE	LYS A 858	-21.914	11.324	-8.292	1.00	45.25
ATOM	1187	NZ	LYS A 858	-23.401	11.471	-8.255	1.00	47.27
ATOM	1188	N	ILE A 859	-20.643	18.068	-9.703	1.00	45.57
ATOM	1189	CA	ILE A 859	-20.203	19.363	-9.185	1.00	45.70
ATOM	1190	C	ILE A 859	-20.098	19.256	-7.669	1.00	47.41
ATOM	1191	O	ILE A 859	-20.981	18.687	-7.023	1.00	48.32
ATOM	1192	CB	ILE A 859	-21.185	20.482	-9.547	1.00	44.76
ATOM	1193	CG1	ILE A 859	-21.259	20.622	-11.074	1.00	44.37
ATOM	1194	CG2	ILE A 859	-20.724	21.793	-8.916	1.00	44.21
ATOM	1195	CD1	ILE A 859	-22.156	21.719	-11.561	1.00	40.72
ATOM	1196	N	THR A 860	-19.018	19.787	-7.104	1.00	46.98
ATOM	1197	CA	THR A 860	-18.811	19.711	-5.662	1.00	47.63
ATOM	1198	C	THR A 860	-18.467	21.050	-5.024	1.00	48.69
ATOM	1199	O	THR A 860	-18.155	22.019	-5.711	1.00	49.80
ATOM	1200	CB	THR A 860	-17.670	18.714	-5.308	1.00	46.89
ATOM	1201	OG1	THR A 860	-17.661	18.468	-3.897	1.00	45.80
ATOM	1202	CG2	THR A 860	-16.322	19.295	-5.686	1.00	44.93

ATOM	1203	N	ASP A 861	-18.526	21.078	-3.696	1.00	49.00
ATOM	1204	CA	ASP A 861	-18.195	22.253	-2.897	1.00	51.12
ATOM	1205	C	ASP A 861	-19.116	23.454	-2.982	1.00	52.18
ATOM	1206	O	ASP A 861	-18.722	24.560	-2.630	1.00	53.11
ATOM	1207	CB	ASP A 861	-16.767	22.716	-3.177	1.00	49.84
ATOM	1208	CG	ASP A 861	-16.057	23.146	-1.914	1.00	52.95
ATOM	1209	OD1	ASP A 861	-16.108	22.375	-0.941	1.00	55.50
ATOM	1210	OD2	ASP A 861	-15.451	24.233	-1.871	1.00	55.17
ATOM	1211	N	PHE A 862	-20.340	23.254	-3.440	1.00	54.22
ATOM	1212	CA	PHE A 862	-21.269	24.367	-3.500	1.00	57.56
ATOM	1213	C	PHE A 862	-21.792	24.637	-2.080	1.00	61.09
ATOM	1214	O	PHE A 862	-22.294	23.734	-1.410	1.00	62.23
ATOM	1215	CB	PHE A 862	-22.429	24.032	-4.437	1.00	55.96
ATOM	1216	CG	PHE A 862	-23.035	22.671	-4.197	1.00	55.99
ATOM	1217	CD1	PHE A 862	-22.751	21.609	-5.051	1.00	56.15
ATOM	1218	CD2	PHE A 862	-23.883	22.448	-3.115	1.00	53.52
ATOM	1219	CE1	PHE A 862	-23.302	20.348	-4.829	1.00	56.04
ATOM	1220	CE2	PHE A 862	-24.435	21.195	-2.886	1.00	52.92
ATOM	1221	CZ	PHE A 862	-24.144	20.141	-3.746	1.00	54.63
ATOM	1222	N	GLY A 863	-21.651	25.866	-1.600	1.00	64.10
ATOM	1223	CA	GLY A 863	-22.153	26.162	-0.268	1.00	67.86
ATOM	1224	C	GLY A 863	-21.176	26.776	0.716	1.00	70.52
ATOM	1225	O	GLY A 863	-21.529	27.720	1.427	1.00	70.56
ATOM	1226	N	LEU A 864	-19.959	26.240	0.780	1.00	72.06
ATOM	1227	CA	LEU A 864	-18.953	26.772	1.691	1.00	73.84
ATOM	1228	C	LEU A 864	-18.657	28.229	1.337	1.00	75.19
ATOM	1229	O	LEU A 864	-18.297	29.027	2.199	1.00	77.44
ATOM	1230	CB	LEU A 864	-17.660	25.955	1.610	1.00	73.25
ATOM	1231	CG	LEU A 864	-17.786	24.442	1.773	1.00	72.21
ATOM	1232	CD1	LEU A 864	-16.405	23.833	1.808	1.00	71.56
ATOM	1233	CD2	LEU A 864	-18.543	24.115	3.037	1.00	71.95
ATOM	1234	N	ALA A 865	-18.812	28.569	0.064	1.00	75.54
ATOM	1235	CA	ALA A 865	-18.564	29.924	-0.403	1.00	75.51
ATOM	1236	C	ALA A 865	-19.274	30.937	0.485	1.00	76.03
ATOM	1237	O	ALA A 865	-18.654	31.859	1.020	1.00	77.18
ATOM	1238	CB	ALA A 865	-19.048	30.067	-1.834	1.00	76.59
ATOM	1239	N	ARG A 866	-20.579	30.757	0.641	1.00	75.54
ATOM	1240	CA	ARG A 866	-21.389	31.661	1.448	1.00	74.65
ATOM	1241	C	ARG A 866	-21.168	31.435	2.940	1.00	73.26
ATOM	1242	O	ARG A 866	-21.048	32.382	3.716	1.00	72.57
ATOM	1243	CB	ARG A 866	-22.869	31.456	1.116	1.00	75.86
ATOM	1244	CG	ARG A 866	-23.797	32.543	1.621	1.00	78.29
ATOM	1245	CD	ARG A 866	-25.223	32.212	1.231	1.00	81.93
ATOM	1246	NE	ARG A 866	-26.098	33.379	1.227	1.00	85.05
ATOM	1247	CZ	ARG A 866	-27.359	33.362	0.800	1.00	87.00

ATOM	1248	NH1 ARG A 866	-27.893	32.233	0.343	1.00	86.94
ATOM	1249	NH2 ARG A 866	-28.082	34.476	0.816	1.00	88.11
ATOM	1250	N LEU A 867	-21.104	30.172	3.333	1.00	71.68
ATOM	1251	CA LEU A 867	-20.929	29.817	4.732	1.00	71.24
ATOM	1252	C LEU A 867	-19.657	30.365	5.369	1.00	70.68
ATOM	1253	O LEU A 867	-19.642	30.649	6.566	1.00	70.39
ATOM	1254	CB LEU A 867	-20.963	28.296	4.885	1.00	70.78
ATOM	1255	CG LEU A 867	-21.160	27.766	6.300	1.00	69.00
ATOM	1256	CD1 LEU A 867	-22.544	28.150	6.800	1.00	70.14
ATOM	1257	CD2 LEU A 867	-21.006	26.262	6.299	1.00	69.35
ATOM	1258	N LEU A 868	-18.597	30.519	4.579	1.00	70.51
ATOM	1259	CA LEU A 868	-17.333	31.021	5.108	1.00	70.64
ATOM	1260	C LEU A 868	-17.202	32.537	5.032	1.00	71.18
ATOM	1261	O LEU A 868	-16.786	33.179	5.996	1.00	71.59
ATOM	1262	CB LEU A 868	-16.152	30.362	4.390	1.00	70.84
ATOM	1263	CG LEU A 868	-16.175	28.826	4.286	1.00	72.40
ATOM	1264	CD1 LEU A 868	-14.780	28.326	3.889	1.00	70.82
ATOM	1265	CD2 LEU A 868	-16.614	28.201	5.610	1.00	70.35
ATOM	1266	N GLU A 869	-17.549	33.121	3.894	1.00	72.14
ATOM	1267	CA GLU A 869	-17.456	34.567	3.771	1.00	72.99
ATOM	1268	C GLU A 869	-18.658	35.262	4.389	1.00	72.22
ATOM	1269	O GLU A 869	-18.633	35.645	5.558	1.00	72.77
ATOM	1270	CB GLU A 869	-17.316	34.968	2.311	1.00	74.69
ATOM	1271	CG GLU A 869	-15.925	34.742	1.782	1.00	78.22
ATOM	1272	CD GLU A 869	-15.688	35.427	0.451	1.00	81.09
ATOM	1273	OE1 GLU A 869	-14.505	35.593	0.097	1.00	81.80
ATOM	1274	OE2 GLU A 869	-16.671	35.793	-0.241	1.00	81.14
ATOM	1275	N GLY A 870	-19.713	35.415	3.602	1.00	71.14
ATOM	1276	CA GLY A 870	-20.910	36.064	4.093	1.00	69.73
ATOM	1277	C GLY A 870	-21.585	36.758	2.941	1.00	69.34
ATOM	1278	O GLY A 870	-21.266	36.488	1.788	1.00	67.87
ATOM	1279	N ASP A 871	-22.514	37.654	3.245	1.00	70.63
ATOM	1280	CA ASP A 871	-23.221	38.388	2.206	1.00	71.41
ATOM	1281	C ASP A 871	-22.979	39.888	2.287	1.00	69.67
ATOM	1282	O ASP A 871	-23.710	40.673	1.693	1.00	70.04
ATOM	1283	CB ASP A 871	-24.720	38.092	2.291	1.00	75.78
ATOM	1284	CG ASP A 871	-25.081	36.742	1.692	1.00	80.13
ATOM	1285	OD1 ASP A 871	-25.017	36.611	0.448	1.00	82.71
ATOM	1286	OD2 ASP A 871	-25.419	35.811	2.458	1.00	81.77
ATOM	1287	N GLU A 872	-21.945	40.288	3.018	1.00	69.40
ATOM	1288	CA GLU A 872	-21.638	41.704	3.156	1.00	69.92
ATOM	1289	C GLU A 872	-21.292	42.261	1.783	1.00	67.97
ATOM	1290	O GLU A 872	-20.261	41.926	1.204	1.00	67.08
ATOM	1291	CB GLU A 872	-20.469	41.902	4.125	1.00	72.87
ATOM	1292	CG GLU A 872	-20.340	43.319	4.675	1.00	78.70

ATOM	1293	CD	GLU A 872	-19.204	43.458	5.689	1.00	83.05
ATOM	1294	OE1	GLU A 872	-19.079	44.535	6.318	1.00	83.94
ATOM	1295	OE2	GLU A 872	-18.429	42.490	5.857	1.00	86.32
ATOM	1296	N	LYS A 873	-22.169	43.109	1.264	1.00	66.05
ATOM	1297	CA	LYS A 873	-21.976	43.703	-0.046	1.00	65.17
ATOM	1298	C	LYS A 873	-20.551	44.188	-0.314	1.00	64.82
ATOM	1299	O	LYS A 873	-19.998	43.941	-1.380	1.00	64.23
ATOM	1300	CB	LYS A 873	-22.956	44.864	-0.234	1.00	65.59
ATOM	1301	CG	LYS A 873	-22.803	45.611	-1.561	1.00	68.09
ATOM	1302	CD	LYS A 873	-23.875	46.686	-1.729	1.00	69.73
ATOM	1303	CE	LYS A 873	-23.672	47.499	-3.007	1.00	71.60
ATOM	1304	NZ	LYS A 873	-24.749	48.517	-3.211	1.00	71.19
ATOM	1305	N	GLU A 874	-19.949	44.873	0.652	1.00	65.02
ATOM	1306	CA	GLU A 874	-18.603	45.397	0.454	1.00	63.95
ATOM	1307	C	GLU A 874	-17.487	44.565	1.065	1.00	62.00
ATOM	1308	O	GLU A 874	-17.587	44.080	2.194	1.00	62.31
ATOM	1309	CB	GLU A 874	-18.518	46.840	0.964	1.00	65.71
ATOM	1310	CG	GLU A 874	-19.059	47.045	2.363	1.00	69.44
ATOM	1311	CD	GLU A 874	-20.576	46.946	2.437	1.00	71.62
ATOM	1312	OE1	GLU A 874	-21.259	47.887	1.973	1.00	71.73
ATOM	1313	OE2	GLU A 874	-21.083	45.923	2.955	1.00	72.76
ATOM	1314	N	TYR A 875	-16.422	44.399	0.290	1.00	59.06
ATOM	1315	CA	TYR A 875	-15.259	43.641	0.720	1.00	57.62
ATOM	1316	C	TYR A 875	-14.381	44.522	1.587	1.00	57.53
ATOM	1317	O	TYR A 875	-14.266	45.724	1.349	1.00	56.84
ATOM	1318	CB	TYR A 875	-14.414	43.225	-0.480	1.00	56.65
ATOM	1319	CG	TYR A 875	-15.098	42.342	-1.484	1.00	56.70
ATOM	1320	CD1	TYR A 875	-15.421	41.027	-1.173	1.00	56.15
ATOM	1321	CD2	TYR A 875	-15.402	42.817	-2.759	1.00	55.46
ATOM	1322	CE1	TYR A 875	-16.027	40.205	-2.103	1.00	56.63
ATOM	1323	CE2	TYR A 875	-16.007	42.005	-3.697	1.00	55.93
ATOM	1324	CZ	TYR A 875	-16.319	40.697	-3.362	1.00	56.44
ATOM	1325	OH	TYR A 875	-16.933	39.879	-4.275	1.00	55.10
ATOM	1326	N	ASN A 876	-13.760	43.933	2.597	1.00	57.67
ATOM	1327	CA	ASN A 876	-12.852	44.705	3.409	1.00	58.46
ATOM	1328	C	ASN A 876	-11.471	44.340	2.859	1.00	59.52
ATOM	1329	O	ASN A 876	-11.382	43.709	1.806	1.00	58.53
ATOM	1330	CB	ASN A 876	-13.016	44.393	4.908	1.00	59.97
ATOM	1331	CG	ASN A 876	-12.785	42.934	5.255	1.00	63.94
ATOM	1332	OD1	ASN A 876	-11.833	42.311	4.775	1.00	67.34
ATOM	1333	ND2	ASN A 876	-13.642	42.387	6.125	1.00	61.21
ATOM	1334	N	ALA A 877	-10.405	44.736	3.546	1.00	60.79
ATOM	1335	CA	ALA A 877	-9.041	44.483	3.081	1.00	61.10
ATOM	1336	C	ALA A 877	-8.689	43.019	2.829	1.00	62.40
ATOM	1337	O	ALA A 877	-7.782	42.714	2.046	1.00	61.52

ATOM	1338	CB	ALA A 877	-8.058	45.080	4.066	1.00	60.97
ATOM	1339	N	ASP A 878	-9.409	42.122	3.494	1.00	63.27
ATOM	1340	CA	ASP A 878	-9.172	40.690	3.370	1.00	63.19
ATOM	1341	C	ASP A 878	-9.636	40.145	2.022	1.00	63.64
ATOM	1342	O	ASP A 878	-9.158	39.107	1.569	1.00	63.47
ATOM	1343	CB	ASP A 878	-9.879	39.958	4.509	1.00	62.08
ATOM	1344	CG	ASP A 878	-9.278	38.604	4.787	1.00	64.16
ATOM	1345	OD1	ASP A 878	-8.034	38.520	4.917	1.00	63.46
ATOM	1346	OD2	ASP A 878	-10.047	37.624	4.885	1.00	65.45
ATOM	1347	N	GLY A 879	-10.571	40.848	1.387	1.00	64.96
ATOM	1348	CA	GLY A 879	-11.081	40.422	0.092	1.00	66.39
ATOM	1349	C	GLY A 879	-11.894	39.139	0.105	1.00	66.47
ATOM	1350	O	GLY A 879	-12.483	38.779	1.124	1.00	67.04
ATOM	1351	N	GLY A 880	-11.920	38.443	-1.031	1.00	66.80
ATOM	1352	CA	GLY A 880	-12.676	37.204	-1.127	1.00	66.89
ATOM	1353	C	GLY A 880	-11.850	35.931	-1.217	1.00	66.50
ATOM	1354	O	GLY A 880	-10.679	35.976	-1.586	1.00	67.73
ATOM	1355	N	LYS A 881	-12.461	34.793	-0.892	1.00	66.57
ATOM	1356	CA	LYS A 881	-11.773	33.503	-0.935	1.00	67.51
ATOM	1357	C	LYS A 881	-11.804	32.841	-2.316	1.00	66.54
ATOM	1358	O	LYS A 881	-10.988	31.958	-2.597	1.00	66.96
ATOM	1359	CB	LYS A 881	-12.353	32.538	0.116	1.00	69.38
ATOM	1360	CG	LYS A 881	-12.196	33.032	1.552	1.00	73.80
ATOM	1361	CD	LYS A 881	-12.514	31.966	2.608	1.00	76.95
ATOM	1362	CE	LYS A 881	-12.271	32.525	4.032	1.00	79.84
ATOM	1363	NZ	LYS A 881	-12.387	31.531	5.153	1.00	77.75
ATOM	1364	N	MET A 882	-12.738	33.255	-3.172	1.00	63.86
ATOM	1365	CA	MET A 882	-12.822	32.682	-4.512	1.00	62.87
ATOM	1366	C	MET A 882	-11.752	33.268	-5.420	1.00	59.24
ATOM	1367	O	MET A 882	-11.448	34.453	-5.344	1.00	59.24
ATOM	1368	CB	MET A 882	-14.182	32.957	-5.152	1.00	67.37
ATOM	1369	CG	MET A 882	-15.308	32.094	-4.663	1.00	73.66
ATOM	1370	SD	MET A 882	-15.853	32.567	-3.040	1.00	80.15
ATOM	1371	CE	MET A 882	-15.822	30.977	-2.239	1.00	79.51
ATOM	1372	N	PRO A 883	-11.175	32.447	-6.303	1.00	55.61
ATOM	1373	CA	PRO A 883	-10.150	33.005	-7.180	1.00	54.96
ATOM	1374	C	PRO A 883	-10.749	34.048	-8.127	1.00	54.82
ATOM	1375	O	PRO A 883	-11.750	33.794	-8.788	1.00	54.42
ATOM	1376	CB	PRO A 883	-9.598	31.769	-7.892	1.00	54.93
ATOM	1377	CG	PRO A 883	-10.765	30.818	-7.897	1.00	55.39
ATOM	1378	CD	PRO A 883	-11.367	31.006	-6.539	1.00	54.78
ATOM	1379	N	ILE A 884	-10.122	35.221	-8.166	1.00	55.44
ATOM	1380	CA	ILE A 884	-10.536	36.360	-8.986	1.00	55.16
ATOM	1381	C	ILE A 884	-10.812	36.062	-10.462	1.00	54.77
ATOM	1382	O	ILE A 884	-11.743	36.609	-11.052	1.00	54.35

ATOM	1383	CB	ILE A 884	-9.457	37.490	-8.930	1.00	57.82
ATOM	1384	CG1	ILE A 884	-9.280	37.996	-7.492	1.00	60.91
ATOM	1385	CG2	ILE A 884	-9.863	38.658	-9.812	1.00	57.84
ATOM	1386	CD1	ILE A 884	-10.456	38.817	-6.963	1.00	61.63
ATOM	1387	N	LYS A 885	-10.003	35.196	-11.057	1.00	54.04
ATOM	1388	CA	LYS A 885	-10.126	34.878	-12.476	1.00	53.74
ATOM	1389	C	LYS A 885	-11.342	34.054	-12.922	1.00	52.87
ATOM	1390	O	LYS A 885	-11.586	33.890	-14.117	1.00	53.63
ATOM	1391	CB	LYS A 885	-8.823	34.222	-12.937	1.00	55.38
ATOM	1392	CG	LYS A 885	-7.609	35.112	-12.690	1.00	57.08
ATOM	1393	CD	LYS A 885	-6.308	34.437	-13.069	1.00	59.92
ATOM	1394	CE	LYS A 885	-5.131	35.372	-12.845	1.00	62.00
ATOM	1395	NZ	LYS A 885	-3.829	34.700	-13.114	1.00	65.60
ATOM	1396	N	TRP A 886	-12.108	33.546	-11.967	1.00	50.16
ATOM	1397	CA	TRP A 886	-13.304	32.766	-12.271	1.00	47.41
ATOM	1398	C	TRP A 886	-14.526	33.578	-11.836	1.00	47.34
ATOM	1399	O	TRP A 886	-15.664	33.109	-11.882	1.00	47.47
ATOM	1400	CB	TRP A 886	-13.268	31.461	-11.483	1.00	45.53
ATOM	1401	CG	TRP A 886	-12.483	30.373	-12.121	1.00	45.12
ATOM	1402	CD1	TRP A 886	-12.967	29.373	-12.911	1.00	42.75
ATOM	1403	CD2	TRP A 886	-11.077	30.149	-12.004	1.00	44.61
ATOM	1404	NE1	TRP A 886	-11.952	28.536	-13.288	1.00	42.27
ATOM	1405	CE2	TRP A 886	-10.778	28.989	-12.747	1.00	43.80
ATOM	1406	CE3	TRP A 886	-10.038	30.814	-11.344	1.00	45.37
ATOM	1407	CZ2	TRP A 886	-9.477	28.476	-12.850	1.00	41.96
ATOM	1408	CZ3	TRP A 886	-8.743	30.302	-11.448	1.00	45.18
ATOM	1409	CH2	TRP A 886	-8.478	29.144	-12.197	1.00	40.59
ATOM	1410	N	MET A 887	-14.266	34.809	-11.428	1.00	45.49
ATOM	1411	CA	MET A 887	-15.292	35.689	-10.903	1.00	47.92
ATOM	1412	C	MET A 887	-15.945	36.606	-11.924	1.00	47.15
ATOM	1413	O	MET A 887	-15.286	37.112	-12.826	1.00	46.97
ATOM	1414	CB	MET A 887	-14.655	36.521	-9.781	1.00	50.44
ATOM	1415	CG	MET A 887	-15.580	37.050	-8.724	1.00	51.18
ATOM	1416	SD	MET A 887	-14.641	37.374	-7.213	1.00	53.31
ATOM	1417	CE	MET A 887	-14.838	35.821	-6.359	1.00	55.22
ATOM	1418	N	ALA A 888	-17.248	36.814	-11.771	1.00	46.65
ATOM	1419	CA	ALA A 888	-17.992	37.707	-12.653	1.00	47.77
ATOM	1420	C	ALA A 888	-17.620	39.138	-12.281	1.00	48.61
ATOM	1421	O	ALA A 888	-17.515	39.483	-11.104	1.00	48.25
ATOM	1422	CB	ALA A 888	-19.491	37.497	-12.486	1.00	45.93
ATOM	1423	N	LEU A 889	-17.418	39.965	-13.294	1.00	50.52
ATOM	1424	CA	LEU A 889	-17.030	41.350	-13.098	1.00	51.06
ATOM	1425	C	LEU A 889	-17.751	42.039	-11.953	1.00	52.52
ATOM	1426	O	LEU A 889	-17.122	42.682	-11.104	1.00	52.90
ATOM	1427	CB	LEU A 889	-17.270	42.121	-14.387	1.00	52.30

ATOM	1428	CG	LEU A 889	-16.926	43.607	-14.399	1.00	53.28
ATOM	1429	CD1	LEU A 889	-15.502	43.802	-13.915	1.00	53.95
ATOM	1430	CD2	LEU A 889	-17.114	44.154	-15.816	1.00	49.72
ATOM	1431	N	GLU A 890	-19.072	41.894	-11.919	1.00	52.25
ATOM	1432	CA	GLU A 890	-19.864	42.538	-10.881	1.00	52.51
ATOM	1433	C	GLU A 890	-19.517	42.070	-9.482	1.00	54.25
ATOM	1434	O	GLU A 890	-19.668	42.821	-8.520	1.00	55.68
ATOM	1435	CB	GLU A 890	-21.361	42.322	-11.116	1.00	51.54
ATOM	1436	CG	GLU A 890	-21.799	40.871	-11.075	1.00	49.82
ATOM	1437	CD	GLU A 890	-21.820	40.236	-12.448	1.00	47.38
ATOM	1438	OE1	GLU A 890	-20.989	40.647	-13.299	1.00	40.49
ATOM	1439	OE2	GLU A 890	-22.664	39.326	-12.650	1.00	42.65
ATOM	1440	N	CYS A 891	-19.059	40.832	-9.361	1.00	55.67
ATOM	1441	CA	CYS A 891	-18.720	40.296	-8.052	1.00	56.74
ATOM	1442	C	CYS A 891	-17.300	40.649	-7.605	1.00	57.48
ATOM	1443	O	CYS A 891	-16.868	40.297	-6.508	1.00	55.50
ATOM	1444	CB	CYS A 891	-18.956	38.781	-8.036	1.00	57.62
ATOM	1445	SG	CYS A 891	-20.729	38.333	-7.970	1.00	57.17
ATOM	1446	N	ILE A 892	-16.576	41.362	-8.458	1.00	58.80
ATOM	1447	CA	ILE A 892	-15.224	41.780	-8.112	1.00	59.01
ATOM	1448	C	ILE A 892	-15.285	43.087	-7.319	1.00	59.18
ATOM	1449	O	ILE A 892	-14.529	43.274	-6.374	1.00	60.68
ATOM	1450	CB	ILE A 892	-14.357	42.018	-9.369	1.00	57.56
ATOM	1451	CG1	ILE A 892	-14.003	40.684	-10.024	1.00	56.20
ATOM	1452	CG2	ILE A 892	-13.104	42.792	-8.996	1.00	54.39
ATOM	1453	CD1	ILE A 892	-13.252	40.841	-11.323	1.00	56.41
ATOM	1454	N	HIS A 893	-16.193	43.981	-7.707	1.00	58.73
ATOM	1455	CA	HIS A 893	-16.333	45.274	-7.046	1.00	57.13
ATOM	1456	C	HIS A 893	-17.139	45.236	-5.757	1.00	55.23
ATOM	1457	O	HIS A 893	-16.951	46.075	-4.879	1.00	55.68
ATOM	1458	CB	HIS A 893	-16.947	46.276	-8.015	1.00	58.88
ATOM	1459	CG	HIS A 893	-16.103	46.532	-9.225	1.00	62.09
ATOM	1460	ND1	HIS A 893	-16.555	46.318	-10.510	1.00	62.92
ATOM	1461	CD2	HIS A 893	-14.825	46.969	-9.344	1.00	63.01
ATOM	1462	CE1	HIS A 893	-15.593	46.609	-11.368	1.00	63.20
ATOM	1463	NE2	HIS A 893	-14.532	47.006	-10.687	1.00	63.80
ATOM	1464	N	TYR A 894	-18.031	44.258	-5.652	1.00	53.00
ATOM	1465	CA	TYR A 894	-18.887	44.072	-4.477	1.00	51.14
ATOM	1466	C	TYR A 894	-19.364	42.639	-4.549	1.00	49.31
ATOM	1467	O	TYR A 894	-19.093	41.949	-5.518	1.00	50.31
ATOM	1468	CB	TYR A 894	-20.135	44.959	-4.542	1.00	52.50
ATOM	1469	CG	TYR A 894	-19.895	46.444	-4.526	1.00	53.58
ATOM	1470	CD1	TYR A 894	-19.719	47.126	-3.327	1.00	54.62
ATOM	1471	CD2	TYR A 894	-19.832	47.167	-5.716	1.00	52.84
ATOM	1472	CE1	TYR A 894	-19.483	48.491	-3.313	1.00	57.08

ATOM	1473	CE2	TYR	A	894	-19.594	48.529	-5.718	1.00	54.76
ATOM	1474	CZ	TYR	A	894	-19.417	49.190	-4.515	1.00	57.74
ATOM	1475	OH	TYR	A	894	-19.147	50.546	-4.505	1.00	59.64
ATOM	1476	N	ARG	A	895	-20.087	42.195	-3.534	1.00	48.76
ATOM	1477	CA	ARG	A	895	-20.624	40.845	-3.535	1.00	50.39
ATOM	1478	C	ARG	A	895	-22.022	40.867	-4.152	1.00	50.91
ATOM	1479	O	ARG	A	895	-23.002	41.194	-3.486	1.00	51.94
ATOM	1480	CB	ARG	A	895	-20.712	40.281	-2.112	1.00	49.62
ATOM	1481	CG	ARG	A	895	-19.382	39.914	-1.498	1.00	49.55
ATOM	1482	CD	ARG	A	895	-19.526	38.808	-0.460	1.00	49.12
ATOM	1483	NE	ARG	A	895	-18.216	38.395	0.034	1.00	53.76
ATOM	1484	CZ	ARG	A	895	-17.475	39.124	0.866	1.00	56.50
ATOM	1485	NH1	ARG	A	895	-16.284	38.688	1.268	1.00	52.02
ATOM	1486	NH2	ARG	A	895	-17.940	40.288	1.316	1.00	57.79
ATOM	1487	N	ALA	A	896	-22.109	40.534	-5.432	1.00	51.10
ATOM	1488	CA	ALA	A	896	-23.392	40.505	-6.122	1.00	49.65
ATOM	1489	C	ALA	A	896	-23.571	39.101	-6.670	1.00	47.43
ATOM	1490	O	ALA	A	896	-23.849	38.925	-7.843	1.00	46.98
ATOM	1491	CB	ALA	A	896	-23.405	41.530	-7.266	1.00	49.62
ATOM	1492	N	PHE	A	897	-23.417	38.098	-5.816	1.00	46.40
ATOM	1493	CA	PHE	A	897	-23.540	36.721	-6.276	1.00	46.89
ATOM	1494	C	PHE	A	897	-24.943	36.276	-6.689	1.00	45.30
ATOM	1495	O	PHE	A	897	-25.889	36.296	-5.902	1.00	44.45
ATOM	1496	CB	PHE	A	897	-22.965	35.759	-5.231	1.00	47.33
ATOM	1497	CG	PHE	A	897	-21.487	35.887	-5.058	1.00	48.54
ATOM	1498	CD1	PHE	A	897	-20.952	36.469	-3.909	1.00	51.22
ATOM	1499	CD2	PHE	A	897	-20.622	35.458	-6.061	1.00	49.59
ATOM	1500	CE1	PHE	A	897	-19.567	36.627	-3.764	1.00	50.13
ATOM	1501	CE2	PHE	A	897	-19.239	35.607	-5.932	1.00	49.10
ATOM	1502	CZ	PHE	A	897	-18.709	36.194	-4.780	1.00	50.78
ATOM	1503	N	THR	A	898	-25.055	35.867	-7.946	1.00	44.73
ATOM	1504	CA	THR	A	898	-26.324	35.413	-8.499	1.00	44.26
ATOM	1505	C	THR	A	898	-26.085	34.245	-9.422	1.00	43.33
ATOM	1506	O	THR	A	898	-24.942	33.943	-9.774	1.00	42.13
ATOM	1507	CB	THR	A	898	-27.000	36.497	-9.356	1.00	44.01
ATOM	1508	OG1	THR	A	898	-26.211	36.730	-10.529	1.00	43.71
ATOM	1509	CG2	THR	A	898	-27.148	37.786	-8.571	1.00	44.17
ATOM	1510	N	HIS	A	899	-27.171	33.595	-9.821	1.00	41.98
ATOM	1511	CA	HIS	A	899	-27.065	32.487	-10.748	1.00	42.31
ATOM	1512	C	HIS	A	899	-26.317	32.987	-11.982	1.00	41.21
ATOM	1513	O	HIS	A	899	-25.520	32.255	-12.567	1.00	42.33
ATOM	1514	CB	HIS	A	899	-28.457	31.985	-11.113	1.00	43.29
ATOM	1515	CG	HIS	A	899	-29.246	31.542	-9.927	1.00	45.33
ATOM	1516	ND1	HIS	A	899	-28.795	30.571	-9.057	1.00	47.28
ATOM	1517	CD2	HIS	A	899	-30.433	31.968	-9.435	1.00	46.03

ATOM	1518	CE1 HIS A 899	-29.667	30.418	-8.078	1.00	46.75
ATOM	1519	NE2 HIS A 899	-30.670	31.255	-8.283	1.00	49.17
ATOM	1520	N GLN A 900	-26.540	34.243	-12.358	1.00	39.59
ATOM	1521	CA GLN A 900	-25.842	34.776	-13.521	1.00	40.74
ATOM	1522	C GLN A 900	-24.325	34.960	-13.315	1.00	39.29
ATOM	1523	O GLN A 900	-23.565	34.901	-14.276	1.00	37.94
ATOM	1524	CB GLN A 900	-26.497	36.078	-14.002	1.00	40.33
ATOM	1525	CG GLN A 900	-27.937	35.893	-14.495	1.00	44.02
ATOM	1526	CD GLN A 900	-28.125	34.695	-15.443	1.00	47.54
ATOM	1527	OE1 GLN A 900	-28.722	33.677	-15.084	1.00	51.69
ATOM	1528	NE2 GLN A 900	-27.610	34.822	-16.660	1.00	48.77
ATOM	1529	N SER A 901	-23.869	35.171	-12.084	1.00	38.33
ATOM	1530	CA SER A 901	-22.428	35.303	-11.870	1.00	37.53
ATOM	1531	C SER A 901	-21.856	33.895	-12.004	1.00	40.00
ATOM	1532	O SER A 901	-20.757	33.702	-12.542	1.00	39.46
ATOM	1533	CB SER A 901	-22.116	35.891	-10.492	1.00	36.74
ATOM	1534	OG SER A 901	-22.775	35.195	-9.451	1.00	40.58
ATOM	1535	N ASP A 902	-22.626	32.913	-11.527	1.00	39.02
ATOM	1536	CA ASP A 902	-22.247	31.511	-11.623	1.00	37.25
ATOM	1537	C ASP A 902	-22.061	31.163	-13.110	1.00	37.82
ATOM	1538	O ASP A 902	-21.139	30.436	-13.480	1.00	37.20
ATOM	1539	CB ASP A 902	-23.337	30.624	-11.005	1.00	38.66
ATOM	1540	CG ASP A 902	-23.065	30.279	-9.533	1.00	40.83
ATOM	1541	OD1 ASP A 902	-22.241	30.958	-8.896	1.00	41.45
ATOM	1542	OD2 ASP A 902	-23.682	29.326	-9.004	1.00	42.94
ATOM	1543	N VAL A 903	-22.929	31.694	-13.966	1.00	36.71
ATOM	1544	CA VAL A 903	-22.819	31.414	-15.390	1.00	37.25
ATOM	1545	C VAL A 903	-21.473	31.890	-15.932	1.00	37.89
ATOM	1546	O VAL A 903	-20.866	31.234	-16.788	1.00	35.97
ATOM	1547	CB VAL A 903	-23.960	32.075	-16.191	1.00	37.16
ATOM	1548	CG1 VAL A 903	-23.578	32.159	-17.657	1.00	35.90
ATOM	1549	CG2 VAL A 903	-25.232	31.264	-16.043	1.00	34.45
ATOM	1550	N TRP A 904	-21.013	33.035	-15.435	1.00	38.74
ATOM	1551	CA TRP A 904	-19.722	33.574	-15.845	1.00	37.48
ATOM	1552	C TRP A 904	-18.660	32.523	-15.494	1.00	35.96
ATOM	1553	O TRP A 904	-17.845	32.134	-16.323	1.00	33.79
ATOM	1554	CB TRP A 904	-19.426	34.875	-15.084	1.00	39.00
ATOM	1555	CG TRP A 904	-18.094	35.469	-15.435	1.00	41.83
ATOM	1556	CD1 TRP A 904	-16.870	34.876	-15.304	1.00	40.23
ATOM	1557	CD2 TRP A 904	-17.858	36.746	-16.041	1.00	43.43
ATOM	1558	NE1 TRP A 904	-15.891	35.695	-15.799	1.00	41.66
ATOM	1559	CE2 TRP A 904	-16.464	36.853	-16.255	1.00	44.01
ATOM	1560	CE3 TRP A 904	-18.688	37.810	-16.425	1.00	44.89
ATOM	1561	CZ2 TRP A 904	-15.876	37.989	-16.840	1.00	45.74
ATOM	1562	CZ3 TRP A 904	-18.105	38.943	-17.010	1.00	46.53

ATOM	1563	CH2 TRP A 904	-16.710	39.020	-17.210	1.00	46.91
ATOM	1564	N SER A 905	-18.681	32.070	-14.249	1.00	34.90
ATOM	1565	CA SER A 905	-17.731	31.078	-13.794	1.00	38.24
ATOM	1566	C SER A 905	-17.793	29.865	-14.726	1.00	38.83
ATOM	1567	O SER A 905	-16.773	29.409	-15.250	1.00	41.08
ATOM	1568	CB SER A 905	-18.059	30.690	-12.354	1.00	39.02
ATOM	1569	OG SER A 905	-18.186	31.852	-11.545	1.00	39.18
ATOM	1570	N TYR A 906	-19.000	29.361	-14.935	1.00	38.14
ATOM	1571	CA TYR A 906	-19.231	28.233	-15.825	1.00	36.99
ATOM	1572	C TYR A 906	-18.456	28.460	-17.123	1.00	37.89
ATOM	1573	O TYR A 906	-17.770	27.574	-17.620	1.00	37.22
ATOM	1574	CB TYR A 906	-20.727	28.127	-16.130	1.00	37.09
ATOM	1575	CG TYR A 906	-21.060	27.090	-17.169	1.00	36.26
ATOM	1576	CD1 TYR A 906	-21.299	25.767	-16.809	1.00	33.65
ATOM	1577	CD2 TYR A 906	-21.056	27.421	-18.522	1.00	35.93
ATOM	1578	CE1 TYR A 906	-21.513	24.800	-17.765	1.00	35.24
ATOM	1579	CE2 TYR A 906	-21.269	26.461	-19.488	1.00	36.62
ATOM	1580	CZ TYR A 906	-21.494	25.147	-19.108	1.00	35.06
ATOM	1581	OH TYR A 906	-21.659	24.187	-20.077	1.00	32.16
ATOM	1582	N GLY A 907	-18.585	29.658	-17.677	1.00	38.18
ATOM	1583	CA GLY A 907	-17.866	29.974	-18.890	1.00	37.34
ATOM	1584	C GLY A 907	-16.368	29.758	-18.734	1.00	39.60
ATOM	1585	O GLY A 907	-15.749	29.097	-19.583	1.00	39.30
ATOM	1586	N VAL A 908	-15.775	30.294	-17.662	1.00	38.75
ATOM	1587	CA VAL A 908	-14.329	30.144	-17.460	1.00	37.84
ATOM	1588	C VAL A 908	-14.006	28.678	-17.254	1.00	38.99
ATOM	1589	O VAL A 908	-12.948	28.189	-17.669	1.00	38.75
ATOM	1590	CB VAL A 908	-13.810	30.938	-16.233	1.00	38.62
ATOM	1591	CG1 VAL A 908	-12.282	30.912	-16.209	1.00	35.04
ATOM	1592	CG2 VAL A 908	-14.315	32.372	-16.274	1.00	33.97
ATOM	1593	N THR A 909	-14.939	27.974	-16.627	1.00	38.38
ATOM	1594	CA THR A 909	-14.764	26.552	-16.375	1.00	37.41
ATOM	1595	C THR A 909	-14.710	25.688	-17.629	1.00	37.98
ATOM	1596	O THR A 909	-13.837	24.837	-17.747	1.00	39.71
ATOM	1597	CB THR A 909	-15.861	26.011	-15.472	1.00	34.91
ATOM	1598	OG1 THR A 909	-15.866	26.753	-14.253	1.00	33.91
ATOM	1599	CG2 THR A 909	-15.610	24.541	-15.161	1.00	34.30
ATOM	1600	N ILE A 910	-15.629	25.877	-18.569	1.00	38.77
ATOM	1601	CA ILE A 910	-15.566	25.043	-19.765	1.00	41.06
ATOM	1602	C ILE A 910	-14.357	25.445	-20.598	1.00	42.01
ATOM	1603	O ILE A 910	-13.887	24.676	-21.444	1.00	39.07
ATOM	1604	CB ILE A 910	-16.841	25.128	-20.628	1.00	40.40
ATOM	1605	CG1 ILE A 910	-17.064	26.549	-21.124	1.00	42.79
ATOM	1606	CG2 ILE A 910	-18.022	24.642	-19.822	1.00	43.12
ATOM	1607	CD1 ILE A 910	-18.166	26.673	-22.162	1.00	43.99

ATOM	1608	N	TRP A 911	-13.857	26.656	-20.347	1.00	42.81
ATOM	1609	CA	TRP A 911	-12.689	27.146	-21.052	1.00	43.02
ATOM	1610	C	TRP A 911	-11.482	26.324	-20.573	1.00	44.92
ATOM	1611	O	TRP A 911	-10.651	25.916	-21.384	1.00	45.96
ATOM	1612	CB	TRP A 911	-12.481	28.625	-20.759	1.00	45.39
ATOM	1613	CG	TRP A 911	-11.281	29.215	-21.435	1.00	49.15
ATOM	1614	CD1	TRP A 911	-11.238	29.822	-22.660	1.00	50.73
ATOM	1615	CD2	TRP A 911	-9.940	29.249	-20.924	1.00	50.38
ATOM	1616	NE1	TRP A 911	-9.954	30.237	-22.942	1.00	49.91
ATOM	1617	CE2	TRP A 911	-9.138	29.897	-21.892	1.00	51.44
ATOM	1618	CE3	TRP A 911	-9.339	28.794	-19.742	1.00	49.30
ATOM	1619	CZ2	TRP A 911	-7.763	30.101	-21.712	1.00	48.85
ATOM	1620	CZ3	TRP A 911	-7.973	28.997	-19.565	1.00	49.14
ATOM	1621	CH2	TRP A 911	-7.203	29.646	-20.548	1.00	48.84
ATOM	1622	N	GLU A 912	-11.388	26.066	-19.268	1.00	44.35
ATOM	1623	CA	GLU A 912	-10.277	25.273	-18.755	1.00	45.12
ATOM	1624	C	GLU A 912	-10.299	23.922	-19.468	1.00	46.73
ATOM	1625	O	GLU A 912	-9.254	23.400	-19.879	1.00	46.06
ATOM	1626	CB	GLU A 912	-10.404	25.030	-17.247	1.00	44.17
ATOM	1627	CG	GLU A 912	-10.530	26.265	-16.378	1.00	45.56
ATOM	1628	CD	GLU A 912	-10.733	25.919	-14.899	1.00	47.51
ATOM	1629	OE1	GLU A 912	-9.766	25.474	-14.243	1.00	48.20
ATOM	1630	OE2	GLU A 912	-11.866	26.080	-14.389	1.00	46.43
ATOM	1631	N	LEU A 913	-11.502	23.371	-19.622	1.00	46.87
ATOM	1632	CA	LEU A 913	-11.691	22.072	-20.270	1.00	45.49
ATOM	1633	C	LEU A 913	-11.261	22.067	-21.724	1.00	46.82
ATOM	1634	O	LEU A 913	-10.522	21.179	-22.150	1.00	48.03
ATOM	1635	CB	LEU A 913	-13.153	21.643	-20.170	1.00	43.18
ATOM	1636	CG	LEU A 913	-13.750	21.713	-18.764	1.00	43.01
ATOM	1637	CD1	LEU A 913	-15.174	21.210	-18.804	1.00	43.13
ATOM	1638	CD2	LEU A 913	-12.916	20.880	-17.790	1.00	40.71
ATOM	1639	N	MET A 914	-11.726	23.052	-22.487	1.00	48.63
ATOM	1640	CA	MET A 914	-11.374	23.148	-23.903	1.00	50.01
ATOM	1641	C	MET A 914	-9.874	23.324	-24.112	1.00	50.22
ATOM	1642	O	MET A 914	-9.363	23.007	-25.182	1.00	50.31
ATOM	1643	CB	MET A 914	-12.108	24.309	-24.576	1.00	51.66
ATOM	1644	CG	MET A 914	-13.611	24.142	-24.660	1.00	54.12
ATOM	1645	SD	MET A 914	-14.103	22.502	-25.184	1.00	55.78
ATOM	1646	CE	MET A 914	-15.162	22.056	-23.847	1.00	54.82
ATOM	1647	N	THR A 915	-9.171	23.846	-23.108	1.00	49.71
ATOM	1648	CA	THR A 915	-7.727	24.013	-23.230	1.00	49.12
ATOM	1649	C	THR A 915	-7.024	22.881	-22.487	1.00	50.59
ATOM	1650	O	THR A 915	-5.851	22.985	-22.133	1.00	50.68
ATOM	1651	CB	THR A 915	-7.240	25.361	-22.663	1.00	47.98
ATOM	1652	OG1	THR A 915	-7.532	25.426	-21.260	1.00	49.13

ATOM	1653	CG2 THR A 915	-7.912	26.526	-23.392	1.00	45.99
ATOM	1654	N PHE A 916	-7.756	21.797	-22.250	1.00	51.37
ATOM	1655	CA PHE A 916	-7.208	20.632	-21.571	1.00	51.95
ATOM	1656	C PHE A 916	-6.429	21.033	-20.317	1.00	53.29
ATOM	1657	O PHE A 916	-5.255	20.692	-20.160	1.00	54.44
ATOM	1658	CB PHE A 916	-6.299	19.861	-22.538	1.00	51.51
ATOM	1659	CG PHE A 916	-7.028	19.251	-23.718	1.00	50.02
ATOM	1660	CD1 PHE A 916	-7.835	18.124	-23.555	1.00	50.49
ATOM	1661	CD2 PHE A 916	-6.896	19.792	-24.988	1.00	47.97
ATOM	1662	CE1 PHE A 916	-8.493	17.548	-24.641	1.00	49.30
ATOM	1663	CE2 PHE A 916	-7.548	19.225	-26.073	1.00	49.17
ATOM	1664	CZ PHE A 916	-8.347	18.102	-25.902	1.00	49.74
ATOM	1665	N GLY A 917	-7.090	21.774	-19.433	1.00	54.12
ATOM	1666	CA GLY A 917	-6.455	22.207	-18.204	1.00	53.22
ATOM	1667	C GLY A 917	-5.687	23.516	-18.292	1.00	53.97
ATOM	1668	O GLY A 917	-4.769	23.745	-17.503	1.00	56.50
ATOM	1669	N GLY A 918	-6.046	24.385	-19.229	1.00	51.72
ATOM	1670	CA GLY A 918	-5.339	25.647	-19.336	1.00	52.43
ATOM	1671	C GLY A 918	-5.579	26.544	-18.135	1.00	54.51
ATOM	1672	O GLY A 918	-6.514	26.323	-17.366	1.00	55.43
ATOM	1673	N LYS A 919	-4.742	27.561	-17.964	1.00	55.17
ATOM	1674	CA LYS A 919	-4.902	28.472	-16.838	1.00	55.34
ATOM	1675	C LYS A 919	-5.396	29.852	-17.268	1.00	55.34
ATOM	1676	O LYS A 919	-4.765	30.528	-18.082	1.00	54.75
ATOM	1677	CB LYS A 919	-3.584	28.608	-16.082	1.00	57.86
ATOM	1678	CG LYS A 919	-3.045	27.296	-15.545	1.00	61.37
ATOM	1679	CD LYS A 919	-1.874	27.539	-14.608	1.00	65.00
ATOM	1680	CE LYS A 919	-2.319	28.318	-13.372	1.00	68.24
ATOM	1681	NZ LYS A 919	-1.174	28.718	-12.493	1.00	70.07
ATOM	1682	N PRO A 920	-6.539	30.287	-16.714	1.00	54.70
ATOM	1683	CA PRO A 920	-7.199	31.571	-16.977	1.00	54.08
ATOM	1684	C PRO A 920	-6.248	32.746	-16.833	1.00	53.70
ATOM	1685	O PRO A 920	-5.558	32.860	-15.828	1.00	54.60
ATOM	1686	CB PRO A 920	-8.292	31.617	-15.920	1.00	53.99
ATOM	1687	CG PRO A 920	-8.618	30.190	-15.718	1.00	56.24
ATOM	1688	CD PRO A 920	-7.269	29.535	-15.683	1.00	54.76
ATOM	1689	N TYR A 921	-6.232	33.624	-17.828	1.00	53.96
ATOM	1690	CA TYR A 921	-5.362	34.794	-17.810	1.00	56.43
ATOM	1691	C TYR A 921	-3.992	34.423	-17.242	1.00	59.51
ATOM	1692	O TYR A 921	-3.519	35.029	-16.276	1.00	59.77
ATOM	1693	CB TYR A 921	-5.996	35.904	-16.972	1.00	53.93
ATOM	1694	CG TYR A 921	-7.477	36.069	-17.217	1.00	50.28
ATOM	1695	CD1 TYR A 921	-8.406	35.456	-16.386	1.00	48.21
ATOM	1696	CD2 TYR A 921	-7.947	36.839	-18.281	1.00	47.29
ATOM	1697	CE1 TYR A 921	-9.760	35.604	-16.597	1.00	47.95

ATOM	1698	CE2 TYR A 921	-9.301	36.993	-18.503	1.00	46.64
ATOM	1699	CZ TYR A 921	-10.204	36.373	-17.654	1.00	48.17
ATOM	1700	OH TYR A 921	-11.552	36.534	-17.841	1.00	46.47
ATOM	1701	N ASP A 922	-3.369	33.424	-17.859	1.00	62.28
ATOM	1702	CA ASP A 922	-2.070	32.918	-17.437	1.00	65.68
ATOM	1703	C ASP A 922	-0.996	33.989	-17.291	1.00	67.52
ATOM	1704	O ASP A 922	-0.560	34.580	-18.281	1.00	68.07
ATOM	1705	CB ASP A 922	-1.573	31.869	-18.427	1.00	66.85
ATOM	1706	CG ASP A 922	-0.510	30.977	-17.830	1.00	69.00
ATOM	1707	OD1 ASP A 922	0.262	31.468	-16.972	1.00	68.93
ATOM	1708	OD2 ASP A 922	-0.445	29.790	-18.223	1.00	69.13
ATOM	1709	N GLY A 923	-0.564	34.221	-16.055	1.00	69.33
ATOM	1710	CA GLY A 923	0.468	35.212	-15.800	1.00	70.77
ATOM	1711	C GLY A 923	-0.022	36.553	-15.281	1.00	71.67
ATOM	1712	O GLY A 923	0.477	37.054	-14.270	1.00	72.97
ATOM	1713	N ILE A 924	-0.995	37.135	-15.973	1.00	71.05
ATOM	1714	CA ILE A 924	-1.548	38.428	-15.592	1.00	70.63
ATOM	1715	C ILE A 924	-1.781	38.545	-14.082	1.00	70.88
ATOM	1716	O ILE A 924	-2.336	37.640	-13.457	1.00	71.74
ATOM	1717	CB ILE A 924	-2.868	38.690	-16.349	1.00	70.59
ATOM	1718	CG1 ILE A 924	-2.652	38.433	-17.848	1.00	70.80
ATOM	1719	CG2 ILE A 924	-3.328	40.127	-16.124	1.00	68.25
ATOM	1720	CD1 ILE A 924	-3.930	38.442	-18.696	1.00	72.84
ATOM	1721	N PRO A 925	-1.340	39.668	-13.480	1.00	70.93
ATOM	1722	CA PRO A 925	-1.446	40.010	-12.055	1.00	70.60
ATOM	1723	C PRO A 925	-2.884	40.065	-11.539	1.00	69.81
ATOM	1724	O PRO A 925	-3.655	40.937	-11.933	1.00	67.59
ATOM	1725	CB PRO A 925	-0.779	41.384	-11.980	1.00	71.26
ATOM	1726	CG PRO A 925	0.207	41.347	-13.091	1.00	70.82
ATOM	1727	CD PRO A 925	-0.599	40.721	-14.196	1.00	70.92
ATOM	1728	N THR A 926	-3.221	39.149	-10.638	1.00	69.20
ATOM	1729	CA THR A 926	-4.559	39.071	-10.061	1.00	70.01
ATOM	1730	C THR A 926	-5.184	40.429	-9.730	1.00	70.43
ATOM	1731	O THR A 926	-6.407	40.578	-9.735	1.00	69.78
ATOM	1732	CB THR A 926	-4.553	38.213	-8.770	1.00	70.42
ATOM	1733	OG1 THR A 926	-5.899	37.915	-8.390	1.00	71.23
ATOM	1734	CG2 THR A 926	-3.870	38.962	-7.623	1.00	71.38
ATOM	1735	N ALA A 927	-4.344	41.417	-9.441	1.00	71.00
ATOM	1736	CA ALA A 927	-4.830	42.746	-9.095	1.00	70.88
ATOM	1737	C ALA A 927	-5.223	43.542	-10.336	1.00	71.19
ATOM	1738	O ALA A 927	-5.820	44.615	-10.237	1.00	72.20
ATOM	1739	CB ALA A 927	-3.759	43.498	-8.305	1.00	69.23
ATOM	1740	N GLU A 928	-4.908	43.008	-11.507	1.00	71.41
ATOM	1741	CA GLU A 928	-5.209	43.709	-12.747	1.00	71.50
ATOM	1742	C GLU A 928	-6.429	43.196	-13.494	1.00	68.69

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ATOM	1743	O	GLU A 928	-6.968	43.892	-14.355	1.00	68.39
ATOM	1744	CB	GLU A 928	-3.983	43.669	-13.659	1.00	73.75
ATOM	1745	CG	GLU A 928	-2.754	44.252	-12.996	1.00	78.75
ATOM	1746	CD	GLU A 928	-1.535	44.234	-13.891	1.00	82.92
ATOM	1747	OE1	GLU A 928	-0.439	44.579	-13.390	1.00	85.58
ATOM	1748	OE2	GLU A 928	-1.672	43.880	-15.087	1.00	83.54
ATOM	1749	N	ILE A 929	-6.868	41.988	-13.167	1.00	65.54
ATOM	1750	CA	ILE A 929	-8.027	41.414	-13.831	1.00	63.43
ATOM	1751	C	ILE A 929	-9.198	42.407	-13.900	1.00	62.00
ATOM	1752	O	ILE A 929	-9.742	42.666	-14.973	1.00	58.78
ATOM	1753	CB	ILE A 929	-8.482	40.126	-13.119	1.00	61.81
ATOM	1754	CG1	ILE A 929	-7.336	39.111	-13.105	1.00	61.74
ATOM	1755	CG2	ILE A 929	-9.689	39.538	-13.822	1.00	62.66
ATOM	1756	CD1	ILE A 929	-6.847	38.691	-14.478	1.00	59.86
ATOM	1757	N	PRO A 930	-9.584	42.991	-12.755	1.00	61.97
ATOM	1758	CA	PRO A 930	-10.694	43.948	-12.732	1.00	62.93
ATOM	1759	C	PRO A 930	-10.643	44.976	-13.856	1.00	64.06
ATOM	1760	O	PRO A 930	-11.641	45.216	-14.538	1.00	62.58
ATOM	1761	CB	PRO A 930	-10.560	44.593	-11.358	1.00	61.80
ATOM	1762	CG	PRO A 930	-10.047	43.479	-10.536	1.00	61.59
ATOM	1763	CD	PRO A 930	-8.984	42.865	-11.417	1.00	60.70
ATOM	1764	N	ASP A 931	-9.476	45.580	-14.046	1.00	66.03
ATOM	1765	CA	ASP A 931	-9.311	46.589	-15.081	1.00	68.58
ATOM	1766	C	ASP A 931	-9.354	46.006	-16.482	1.00	67.95
ATOM	1767	O	ASP A 931	-10.012	46.563	-17.360	1.00	67.90
ATOM	1768	CB	ASP A 931	-8.007	47.353	-14.866	1.00	73.60
ATOM	1769	CG	ASP A 931	-8.015	48.146	-13.572	1.00	78.41
ATOM	1770	OD1	ASP A 931	-8.154	47.523	-12.485	1.00	79.78
ATOM	1771	OD2	ASP A 931	-7.890	49.391	-13.645	1.00	80.42
ATOM	1772	N	LEU A 932	-8.654	44.896	-16.698	1.00	67.05
ATOM	1773	CA	LEU A 932	-8.660	44.252	-18.007	1.00	66.68
ATOM	1774	C	LEU A 932	-10.110	44.019	-18.434	1.00	67.26
ATOM	1775	O	LEU A 932	-10.551	44.492	-19.484	1.00	67.71
ATOM	1776	CB	LEU A 932	-7.932	42.909	-17.946	1.00	66.91
ATOM	1777	CG	LEU A 932	-6.415	42.931	-17.754	1.00	68.66
ATOM	1778	CD1	LEU A 932	-5.905	41.504	-17.553	1.00	67.81
ATOM	1779	CD2	LEU A 932	-5.753	43.581	-18.977	1.00	68.04
ATOM	1780	N	LEU A 933	-10.849	43.297	-17.599	1.00	66.10
ATOM	1781	CA	LEU A 933	-12.240	42.982	-17.874	1.00	65.55
ATOM	1782	C	LEU A 933	-13.049	44.190	-18.319	1.00	65.37
ATOM	1783	O	LEU A 933	-13.751	44.135	-19.331	1.00	65.79
ATOM	1784	CB	LEU A 933	-12.878	42.355	-16.638	1.00	64.86
ATOM	1785	CG	LEU A 933	-12.233	41.030	-16.223	1.00	65.13
ATOM	1786	CD1	LEU A 933	-12.696	40.652	-14.828	1.00	65.75
ATOM	1787	CD2	LEU A 933	-12.579	39.945	-17.229	1.00	63.48

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ATOM	1788	N	GLU A 934	-12.947	45.280	-17.567	1.00	65.40
ATOM	1789	CA	GLU A 934	-13.687	46.497	-17.885	1.00	65.09
ATOM	1790	C	GLU A 934	-13.162	47.174	-19.132	1.00	63.61
ATOM	1791	O	GLU A 934	-13.890	47.907	-19.797	1.00	61.44
ATOM	1792	CB	GLU A 934	-13.657	47.451	-16.693	1.00	65.83
ATOM	1793	CG	GLU A 934	-14.514	46.926	-15.558	1.00	71.06
ATOM	1794	CD	GLU A 934	-14.315	47.656	-14.251	1.00	73.66
ATOM	1795	OE1	GLU A 934	-13.217	47.534	-13.659	1.00	75.01
ATOM	1796	OE2	GLU A 934	-15.267	48.344	-13.815	1.00	75.23
ATOM	1797	N	LYS A 935	-11.896	46.926	-19.446	1.00	63.09
ATOM	1798	CA	LYS A 935	-11.305	47.492	-20.644	1.00	64.10
ATOM	1799	C	LYS A 935	-11.907	46.696	-21.792	1.00	64.34
ATOM	1800	O	LYS A 935	-12.094	47.221	-22.884	1.00	65.68
ATOM	1801	CB	LYS A 935	-9.787	47.316	-20.642	1.00	66.02
ATOM	1802	CG	LYS A 935	-9.036	48.128	-19.598	1.00	68.95
ATOM	1803	CD	LYS A 935	-8.968	49.594	-19.972	1.00	72.74
ATOM	1804	CE	LYS A 935	-7.957	50.327	-19.106	1.00	74.63
ATOM	1805	NZ	LYS A 935	-7.835	51.751	-19.525	1.00	76.76
ATOM	1806	N	GLY A 936	-12.204	45.422	-21.534	1.00	62.92
ATOM	1807	CA	GLY A 936	-12.800	44.578	-22.552	1.00	61.68
ATOM	1808	C	GLY A 936	-12.202	43.192	-22.683	1.00	61.72
ATOM	1809	O	GLY A 936	-12.830	42.298	-23.250	1.00	61.81
ATOM	1810	N	GLU A 937	-10.991	43.013	-22.164	1.00	60.83
ATOM	1811	CA	GLU A 937	-10.276	41.734	-22.217	1.00	59.06
ATOM	1812	C	GLU A 937	-11.148	40.509	-21.889	1.00	57.16
ATOM	1813	O	GLU A 937	-12.066	40.588	-21.073	1.00	56.93
ATOM	1814	CB	GLU A 937	-9.086	41.774	-21.245	1.00	59.84
ATOM	1815	CG	GLU A 937	-8.222	40.530	-21.268	1.00	62.61
ATOM	1816	CD	GLU A 937	-6.844	40.793	-21.823	1.00	64.42
ATOM	1817	OE1	GLU A 937	-6.690	41.760	-22.595	1.00	64.76
ATOM	1818	OE2	GLU A 937	-5.916	40.024	-21.495	1.00	66.97
ATOM	1819	N	ARG A 938	-10.842	39.382	-22.528	1.00	54.12
ATOM	1820	CA	ARG A 938	-11.561	38.127	-22.311	1.00	51.97
ATOM	1821	C	ARG A 938	-10.653	36.961	-22.658	1.00	51.14
ATOM	1822	O	ARG A 938	-9.759	37.104	-23.486	1.00	54.50
ATOM	1823	CB	ARG A 938	-12.810	38.053	-23.190	1.00	50.05
ATOM	1824	CG	ARG A 938	-13.914	38.970	-22.756	1.00	48.91
ATOM	1825	CD	ARG A 938	-14.329	38.646	-21.338	1.00	49.76
ATOM	1826	NE	ARG A 938	-14.723	39.860	-20.636	1.00	54.12
ATOM	1827	CZ	ARG A 938	-15.817	40.555	-20.911	1.00	53.77
ATOM	1828	NH1	ARG A 938	-16.624	40.141	-21.874	1.00	60.00
ATOM	1829	NH2	ARG A 938	-16.104	41.654	-20.235	1.00	48.85
ATOM	1830	N	LEU A 939	-10.876	35.810	-22.035	1.00	47.64
ATOM	1831	CA	LEU A 939	-10.059	34.647	-22.338	1.00	47.01
ATOM	1832	C	LEU A 939	-10.058	34.409	-23.854	1.00	46.67

Atom 1833 O LEU A 939 -11.041 34.691 -24.539 1.00 45.61

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ATOM	1833	O	LEU A 939	-11.041	34.691	-24.539	1.00	45.61
ATOM	1834	CB	LEU A 939	-10.591	33.422	-21.587	1.00	46.49
ATOM	1835	CG	LEU A 939	-10.427	33.537	-20.065	1.00	45.25
ATOM	1836	CD1	LEU A 939	-11.279	32.505	-19.343	1.00	43.35
ATOM	1837	CD2	LEU A 939	-8.968	33.376	-19.716	1.00	42.97
ATOM	1838	N	PRO A 940	-8.943	33.896	-24.397	1.00	46.22
ATOM	1839	CA	PRO A 940	-8.749	33.604	-25.826	1.00	44.26
ATOM	1840	C	PRO A 940	-9.532	32.402	-26.327	1.00	45.20
ATOM	1841	O	PRO A 940	-9.911	31.533	-25.555	1.00	46.46
ATOM	1842	CB	PRO A 940	-7.252	33.336	-25.936	1.00	42.34
ATOM	1843	CG	PRO A 940	-6.672	33.871	-24.654	1.00	46.14
ATOM	1844	CD	PRO A 940	-7.726	33.590	-23.637	1.00	43.98
ATOM	1845	N	GLN A 941	-9.737	32.346	-27.637	1.00	46.70
ATOM	1846	CA	GLN A 941	-10.448	31.242	-28.263	1.00	46.31
ATOM	1847	C	GLN A 941	-9.558	30.012	-28.242	1.00	46.69
ATOM	1848	O	GLN A 941	-8.479	30.009	-28.824	1.00	46.60
ATOM	1849	CB	GLN A 941	-10.810	31.605	-29.704	1.00	45.70
ATOM	1850	CG	GLN A 941	-11.506	30.500	-30.467	1.00	46.44
ATOM	1851	CD	GLN A 941	-12.083	30.960	-31.808	1.00	48.60
ATOM	1852	OE1	GLN A 941	-12.721	30.178	-32.521	1.00	47.90
ATOM	1853	NE2	GLN A 941	-11.861	32.226	-32.154	1.00	50.29
ATOM	1854	N	PRO A 942	-9.992	28.950	-27.553	1.00	48.40
ATOM	1855	CA	PRO A 942	-9.184	27.728	-27.490	1.00	49.09
ATOM	1856	C	PRO A 942	-8.955	27.174	-28.894	1.00	50.75
ATOM	1857	O	PRO A 942	-9.822	27.268	-29.755	1.00	52.32
ATOM	1858	CB	PRO A 942	-10.036	26.793	-26.635	1.00	47.59
ATOM	1859	CG	PRO A 942	-10.810	27.745	-25.767	1.00	49.17
ATOM	1860	CD	PRO A 942	-11.210	28.822	-26.739	1.00	46.31
ATOM	1861	N	PRO A 943	-7.781	26.584	-29.141	1.00	52.29
ATOM	1862	CA	PRO A 943	-7.452	26.017	-30.450	1.00	51.87
ATOM	1863	C	PRO A 943	-8.535	25.089	-31.025	1.00	52.45
ATOM	1864	O	PRO A 943	-9.006	25.300	-32.147	1.00	53.80
ATOM	1865	CB	PRO A 943	-6.149	25.270	-30.175	1.00	53.02
ATOM	1866	CG	PRO A 943	-5.511	26.097	-29.120	1.00	52.76
ATOM	1867	CD	PRO A 943	-6.670	26.391	-28.195	1.00	53.36
ATOM	1868	N	ILE A 944	-8.927	24.073	-30.256	1.00	50.16
ATOM	1869	CA	ILE A 944	-9.928	23.100	-30.702	1.00	48.57
ATOM	1870	C	ILE A 944	-11.349	23.635	-30.776	1.00	49.82
ATOM	1871	O	ILE A 944	-12.259	22.953	-31.268	1.00	47.90
ATOM	1872	CB	ILE A 944	-9.973	21.876	-29.778	1.00	47.78
ATOM	1873	CG1	ILE A 944	-10.608	22.255	-28.430	1.00	43.48
ATOM	1874	CG2	ILE A 944	-8.579	21.321	-29.607	1.00	46.76
ATOM	1875	CD1	ILE A 944	-10.784	21.080	-27.499	1.00	42.87
ATOM	1876	N	CYS A 945	-11.542	24.847	-30.275	1.00	51.05
ATOM	1877	CA	CYS A 945	-12.860	25.449	-30.270	1.00	51.69

ATOM	1878	C	CYS A 945	-13.254	26.015	-31.604	1.00	52.55
ATOM	1879	O	CYS A 945	-12.490	26.739	-32.240	1.00	55.03
ATOM	1880	CB	CYS A 945	-12.951	26.557	-29.217	1.00	52.52
ATOM	1881	SG	CYS A 945	-13.270	25.971	-27.546	1.00	52.50
ATOM	1882	N	THR A 946	-14.465	25.666	-32.011	1.00	51.88
ATOM	1883	CA	THR A 946	-15.059	26.138	-33.246	1.00	50.67
ATOM	1884	C	THR A 946	-15.703	27.448	-32.793	1.00	49.33
ATOM	1885	O	THR A 946	-16.054	27.571	-31.626	1.00	49.43
ATOM	1886	CB	THR A 946	-16.126	25.127	-33.733	1.00	50.13
ATOM	1887	OG1	THR A 946	-16.468	25.404	-35.091	1.00	52.85
ATOM	1888	CG2	THR A 946	-17.376	25.205	-32.871	1.00	46.57
ATOM	1889	N	ILE A 947	-15.849	28.424	-33.684	1.00	49.50
ATOM	1890	CA	ILE A 947	-16.436	29.705	-33.289	1.00	48.83
ATOM	1891	C	ILE A 947	-17.843	29.569	-32.718	1.00	49.26
ATOM	1892	O	ILE A 947	-18.415	30.527	-32.195	1.00	52.14
ATOM	1893	CB	ILE A 947	-16.481	30.714	-34.454	1.00	48.12
ATOM	1894	CG1	ILE A 947	-16.732	32.121	-33.888	1.00	49.16
ATOM	1895	CG2	ILE A 947	-17.570	30.321	-35.452	1.00	46.40
ATOM	1896	CD1	ILE A 947	-16.721	33.247	-34.909	1.00	50.09
ATOM	1897	N	ASP A 948	-18.407	28.379	-32.819	1.00	48.28
ATOM	1898	CA	ASP A 948	-19.734	28.137	-32.279	1.00	47.63
ATOM	1899	C	ASP A 948	-19.621	27.996	-30.761	1.00	46.50
ATOM	1900	O	ASP A 948	-20.413	28.583	-30.012	1.00	46.41
ATOM	1901	CB	ASP A 948	-20.311	26.857	-32.888	1.00	49.31
ATOM	1902	CG	ASP A 948	-20.568	26.988	-34.377	1.00	49.35
ATOM	1903	OD1	ASP A 948	-21.612	27.553	-34.737	1.00	52.88
ATOM	1904	OD2	ASP A 948	-19.729	26.543	-35.186	1.00	50.17
ATOM	1905	N	VAL A 949	-18.626	27.226	-30.317	1.00	43.56
ATOM	1906	CA	VAL A 949	-18.405	26.998	-28.896	1.00	43.65
ATOM	1907	C	VAL A 949	-17.894	28.262	-28.222	1.00	43.64
ATOM	1908	O	VAL A 949	-18.333	28.619	-27.127	1.00	44.08
ATOM	1909	CB	VAL A 949	-17.381	25.858	-28.654	1.00	43.97
ATOM	1910	CG1	VAL A 949	-17.132	25.689	-27.158	1.00	41.83
ATOM	1911	CG2	VAL A 949	-17.895	24.551	-29.246	1.00	41.36
ATOM	1912	N	TYR A 950	-16.965	28.939	-28.885	1.00	43.36
ATOM	1913	CA	TYR A 950	-16.395	30.160	-28.343	1.00	42.30
ATOM	1914	C	TYR A 950	-17.478	31.180	-28.036	1.00	41.41
ATOM	1915	O	TYR A 950	-17.489	31.774	-26.961	1.00	40.32
ATOM	1916	CB	TYR A 950	-15.386	30.760	-29.322	1.00	43.03
ATOM	1917	CG	TYR A 950	-14.489	31.806	-28.686	1.00	45.66
ATOM	1918	CD1	TYR A 950	-13.837	31.549	-27.473	1.00	45.82
ATOM	1919	CD2	TYR A 950	-14.283	33.044	-29.290	1.00	46.41
ATOM	1920	CE1	TYR A 950	-13.004	32.496	-26.879	1.00	44.71
ATOM	1921	CE2	TYR A 950	-13.446	34.002	-28.701	1.00	47.81
ATOM	1922	CZ	TYR A 950	-12.811	33.715	-27.498	1.00	46.62

ATOM	1923	OH	TYR A 950	-11.967	34.638	-26.931	1.00	46.10
ATOM	1924	N	MET A 951	-18.390	31.386	-28.978	1.00	41.91
ATOM	1925	CA	MET A 951	-19.459	32.343	-28.761	1.00	43.90
ATOM	1926	C	MET A 951	-20.267	31.988	-27.532	1.00	44.53
ATOM	1927	O	MET A 951	-20.776	32.877	-26.849	1.00	47.60
ATOM	1928	CB	MET A 951	-20.366	32.447	-29.989	1.00	47.27
ATOM	1929	CG	MET A 951	-19.674	33.105	-31.166	1.00	53.88
ATOM	1930	SD	MET A 951	-18.776	34.589	-30.618	1.00	62.31
ATOM	1931	CE	MET A 951	-20.155	35.487	-29.841	1.00	55.74
ATOM	1932	N	VAL A 952	-20.397	30.700	-27.232	1.00	42.77
ATOM	1933	CA	VAL A 952	-21.131	30.334	-26.031	1.00	42.94
ATOM	1934	C	VAL A 952	-20.352	30.869	-24.819	1.00	44.09
ATOM	1935	O	VAL A 952	-20.928	31.493	-23.923	1.00	44.56
ATOM	1936	CB	VAL A 952	-21.341	28.795	-25.924	1.00	42.99
ATOM	1937	CG1	VAL A 952	-21.891	28.430	-24.551	1.00	39.35
ATOM	1938	CG2	VAL A 952	-22.332	28.339	-26.999	1.00	39.89
ATOM	1939	N	MET A 953	-19.039	30.654	-24.807	1.00	44.23
ATOM	1940	CA	MET A 953	-18.202	31.142	-23.711	1.00	45.49
ATOM	1941	C	MET A 953	-18.231	32.670	-23.603	1.00	45.43
ATOM	1942	O	MET A 953	-18.393	33.225	-22.510	1.00	45.00
ATOM	1943	CB	MET A 953	-16.759	30.683	-23.900	1.00	44.82
ATOM	1944	CG	MET A 953	-16.587	29.199	-23.816	1.00	48.13
ATOM	1945	SD	MET A 953	-14.944	28.724	-24.267	1.00	52.76
ATOM	1946	CE	MET A 953	-15.146	26.965	-24.437	1.00	52.38
ATOM	1947	N	VAL A 954	-18.081	33.353	-24.734	1.00	42.69
ATOM	1948	CA	VAL A 954	-18.086	34.804	-24.705	1.00	42.88
ATOM	1949	C	VAL A 954	-19.408	35.363	-24.175	1.00	43.39
ATOM	1950	O	VAL A 954	-19.402	36.290	-23.381	1.00	44.32
ATOM	1951	CB	VAL A 954	-17.792	35.394	-26.090	1.00	42.98
ATOM	1952	CG1	VAL A 954	-17.863	36.890	-26.020	1.00	44.13
ATOM	1953	CG2	VAL A 954	-16.403	34.961	-26.565	1.00	43.05
ATOM	1954	N	LYS A 955	-20.545	34.812	-24.589	1.00	43.09
ATOM	1955	CA	LYS A 955	-21.814	35.327	-24.070	1.00	44.12
ATOM	1956	C	LYS A 955	-21.844	35.189	-22.552	1.00	43.87
ATOM	1957	O	LYS A 955	-22.417	36.024	-21.855	1.00	44.04
ATOM	1958	CB	LYS A 955	-23.012	34.573	-24.656	1.00	45.68
ATOM	1959	CG	LYS A 955	-23.304	34.831	-26.123	1.00	46.27
ATOM	1960	CD	LYS A 955	-24.430	33.924	-26.563	1.00	46.94
ATOM	1961	CE	LYS A 955	-24.660	33.965	-28.048	1.00	50.31
ATOM	1962	NZ	LYS A 955	-25.433	32.759	-28.442	1.00	51.04
ATOM	1963	N	CYS A 956	-21.238	34.123	-22.042	1.00	43.06
ATOM	1964	CA	CYS A 956	-21.199	33.896	-20.602	1.00	43.04
ATOM	1965	C	CYS A 956	-20.505	35.042	-19.861	1.00	44.88
ATOM	1966	O	CYS A 956	-20.712	35.235	-18.652	1.00	42.74
ATOM	1967	CB	CYS A 956	-20.453	32.606	-20.296	1.00	40.76

ATOM	1968	SG	CYS A 956	-21.406	31.114	-20.517	1.00	40.75
ATOM	1969	N	TRP A 957	-19.684	35.796	-20.593	1.00	46.16
ATOM	1970	CA	TRP A 957	-18.929	36.888	-20.006	1.00	47.28
ATOM	1971	C	TRP A 957	-19.409	38.283	-20.373	1.00	49.59
ATOM	1972	O	TRP A 957	-18.629	39.231	-20.342	1.00	50.87
ATOM	1973	CB	TRP A 957	-17.442	36.749	-20.365	1.00	44.94
ATOM	1974	CG	TRP A 957	-16.881	35.389	-20.062	1.00	41.87
ATOM	1975	CD1	TRP A 957	-17.113	34.636	-18.949	1.00	40.97
ATOM	1976	CD2	TRP A 957	-15.987	34.628	-20.880	1.00	40.66
ATOM	1977	NE1	TRP A 957	-16.423	33.450	-19.022	1.00	41.10
ATOM	1978	CE2	TRP A 957	-15.720	33.419	-20.196	1.00	39.58
ATOM	1979	CE3	TRP A 957	-15.383	34.850	-22.125	1.00	39.57
ATOM	1980	CZ2	TRP A 957	-14.877	32.435	-20.712	1.00	39.64
ATOM	1981	CZ3	TRP A 957	-14.545	33.871	-22.639	1.00	40.43
ATOM	1982	CH2	TRP A 957	-14.298	32.676	-21.930	1.00	40.43
ATOM	1983	N	MET A 958	-20.682	38.425	-20.720	1.00	50.92
ATOM	1984	CA	MET A 958	-21.186	39.752	-21.048	1.00	52.62
ATOM	1985	C	MET A 958	-21.165	40.609	-19.789	1.00	50.99
ATOM	1986	O	MET A 958	-21.272	40.098	-18.676	1.00	49.32
ATOM	1987	CB	MET A 958	-22.609	39.682	-21.598	1.00	54.02
ATOM	1988	CG	MET A 958	-22.708	38.991	-22.941	1.00	57.72
ATOM	1989	SD	MET A 958	-21.589	39.707	-24.136	1.00	61.72
ATOM	1990	CE	MET A 958	-22.626	41.096	-24.754	1.00	62.55
ATOM	1991	N	ILE A 959	-21.009	41.913	-19.968	1.00	51.63
ATOM	1992	CA	ILE A 959	-20.979	42.819	-18.829	1.00	53.09
ATOM	1993	C	ILE A 959	-22.342	42.742	-18.161	1.00	52.72
ATOM	1994	O	ILE A 959	-22.461	42.808	-16.944	1.00	52.77
ATOM	1995	CB	ILE A 959	-20.740	44.273	-19.267	1.00	53.98
ATOM	1996	CG1	ILE A 959	-19.387	44.387	-19.981	1.00	57.72
ATOM	1997	CG2	ILE A 959	-20.785	45.191	-18.050	1.00	53.54
ATOM	1998	CD1	ILE A 959	-19.163	45.733	-20.703	1.00	60.53
ATOM	1999	N	ASP A 960	-23.374	42.584	-18.977	1.00	53.04
ATOM	2000	CA	ASP A 960	-24.733	42.505	-18.472	1.00	54.30
ATOM	2001	C	ASP A 960	-25.075	41.102	-17.961	1.00	53.33
ATOM	2002	O	ASP A 960	-25.337	40.191	-18.739	1.00	50.47
ATOM	2003	CB	ASP A 960	-25.706	42.903	-19.575	1.00	57.50
ATOM	2004	CG	ASP A 960	-26.971	43.511	-19.035	1.00	59.92
ATOM	2005	OD1	ASP A 960	-27.626	42.880	-18.177	1.00	63.64
ATOM	2006	OD2	ASP A 960	-27.312	44.626	-19.476	1.00	62.47
ATOM	2007	N	ALA A 961	-25.077	40.942	-16.646	1.00	53.51
ATOM	2008	CA	ALA A 961	-25.384	39.659	-16.033	1.00	54.51
ATOM	2009	C	ALA A 961	-26.650	39.046	-16.637	1.00	55.26
ATOM	2010	O	ALA A 961	-26.690	37.856	-16.956	1.00	53.76
ATOM	2011	CB	ALA A 961	-25.549	39.839	-14.528	1.00	52.04
ATOM	2012	N	ASP A 962	-27.677	39.870	-16.804	1.00	56.69

ATOM	2013	CA	ASP A 962	-28.942	39.405	-17.360	1.00	58.69
ATOM	2014	C	ASP A 962	-28.948	38.994	-18.830	1.00	57.34
ATOM	2015	O	ASP A 962	-29.803	38.211	-19.241	1.00	57.60
ATOM	2016	CB	ASP A 962	-30.043	40.439	-17.118	1.00	61.14
ATOM	2017	CG	ASP A 962	-30.633	40.339	-15.724	1.00	64.05
ATOM	2018	OD1	ASP A 962	-30.863	39.199	-15.259	1.00	62.71
ATOM	2019	OD2	ASP A 962	-30.876	41.396	-15.103	1.00	68.35
ATOM	2020	N	SER A 963	-28.022	39.509	-19.631	1.00	56.01
ATOM	2021	CA	SER A 963	-27.996	39.111	-21.031	1.00	54.55
ATOM	2022	C	SER A 963	-27.117	37.870	-21.249	1.00	53.95
ATOM	2023	O	SER A 963	-26.940	37.415	-22.378	1.00	55.77
ATOM	2024	CB	SER A 963	-27.537	40.275	-21.925	1.00	55.92
ATOM	2025	OG	SER A 963	-26.176	40.600	-21.734	1.00	55.38
ATOM	2026	N	ARG A 964	-26.565	37.323	-20.170	1.00	51.26
ATOM	2027	CA	ARG A 964	-25.746	36.115	-20.272	1.00	50.44
ATOM	2028	C	ARG A 964	-26.711	34.942	-20.410	1.00	50.43
ATOM	2029	O	ARG A 964	-27.820	34.970	-19.874	1.00	50.63
ATOM	2030	CB	ARG A 964	-24.899	35.900	-19.010	1.00	47.22
ATOM	2031	CG	ARG A 964	-23.902	36.994	-18.724	1.00	45.09
ATOM	2032	CD	ARG A 964	-23.324	36.875	-17.329	1.00	42.47
ATOM	2033	NE	ARG A 964	-22.590	38.085	-16.981	1.00	44.27
ATOM	2034	CZ	ARG A 964	-22.156	38.392	-15.761	1.00	43.66
ATOM	2035	NH1	ARG A 964	-22.368	37.577	-14.736	1.00	38.19
ATOM	2036	NH2	ARG A 964	-21.527	39.543	-15.567	1.00	43.56
ATOM	2037	N	PRO A 965	-26.303	33.891	-21.126	1.00	50.03
ATOM	2038	CA	PRO A 965	-27.230	32.762	-21.256	1.00	50.55
ATOM	2039	C	PRO A 965	-27.593	32.164	-19.890	1.00	50.02
ATOM	2040	O	PRO A 965	-26.851	32.318	-18.920	1.00	50.28
ATOM	2041	CB	PRO A 965	-26.460	31.786	-22.146	1.00	49.94
ATOM	2042	CG	PRO A 965	-25.011	32.123	-21.855	1.00	51.67
ATOM	2043	CD	PRO A 965	-25.011	33.617	-21.780	1.00	49.61
ATOM	2044	N	LYS A 966	-28.748	31.515	-19.804	1.00	48.80
ATOM	2045	CA	LYS A 966	-29.153	30.889	-18.554	1.00	48.28
ATOM	2046	C	LYS A 966	-28.753	29.418	-18.572	1.00	47.56
ATOM	2047	O	LYS A 966	-28.629	28.808	-19.642	1.00	45.03
ATOM	2048	CB	LYS A 966	-30.654	31.021	-18.343	1.00	49.99
ATOM	2049	CG	LYS A 966	-31.096	32.436	-18.067	1.00	55.88
ATOM	2050	CD	LYS A 966	-32.242	32.462	-17.073	1.00	60.89
ATOM	2051	CE	LYS A 966	-32.579	33.893	-16.660	1.00	64.65
ATOM	2052	NZ	LYS A 966	-33.599	33.951	-15.563	1.00	65.07
ATOM	2053	N	PHE A 967	-28.546	28.842	-17.392	1.00	45.93
ATOM	2054	CA	PHE A 967	-28.138	27.449	-17.327	1.00	46.66
ATOM	2055	C	PHE A 967	-29.005	26.499	-18.135	1.00	47.20
ATOM	2056	O	PHE A 967	-28.518	25.470	-18.579	1.00	49.36
ATOM	2057	CB	PHE A 967	-28.029	26.988	-15.875	1.00	46.03

ATOM	2058	CG	PHE A 967	-26.767	27.437	-15.213	1.00	45.56
ATOM	2059	CD1	PHE A 967	-26.792	28.392	-14.199	1.00	45.88
ATOM	2060	CD2	PHE A 967	-25.535	26.971	-15.669	1.00	44.49
ATOM	2061	CE1	PHE A 967	-25.599	28.886	-13.650	1.00	47.81
ATOM	2062	CE2	PHE A 967	-24.340	27.455	-15.131	1.00	46.71
ATOM	2063	CZ	PHE A 967	-24.368	28.416	-14.119	1.00	45.70
ATOM	2064	N	ALA A 968	-30.275	26.846	-18.340	1.00	47.85
ATOM	2065	CA	ALA A 968	-31.183	26.014	-19.136	1.00	48.27
ATOM	2066	C	ALA A 968	-30.746	25.988	-20.615	1.00	49.39
ATOM	2067	O	ALA A 968	-30.753	24.943	-21.264	1.00	49.53
ATOM	2068	CB	ALA A 968	-32.620	26.542	-19.028	1.00	45.49
ATOM	2069	N	GLU A 969	-30.358	27.142	-21.144	1.00	49.32
ATOM	2070	CA	GLU A 969	-29.939	27.226	-22.533	1.00	48.74
ATOM	2071	C	GLU A 969	-28.574	26.587	-22.760	1.00	48.05
ATOM	2072	O	GLU A 969	-28.325	25.986	-23.812	1.00	47.73
ATOM	2073	CB	GLU A 969	-29.863	28.682	-22.976	1.00	51.47
ATOM	2074	CG	GLU A 969	-31.120	29.492	-22.779	1.00	55.25
ATOM	2075	CD	GLU A 969	-30.928	30.929	-23.246	1.00	60.64
ATOM	2076	OE1	GLU A 969	-30.233	31.703	-22.539	1.00	58.91
ATOM	2077	OE2	GLU A 969	-31.454	31.274	-24.335	1.00	63.69
ATOM	2078	N	LEU A 970	-27.681	26.739	-21.784	1.00	44.93
ATOM	2079	CA	LEU A 970	-26.343	26.186	-21.918	1.00	42.24
ATOM	2080	C	LEU A 970	-26.430	24.686	-22.019	1.00	41.43
ATOM	2081	O	LEU A 970	-25.822	24.081	-22.901	1.00	40.90
ATOM	2082	CB	LEU A 970	-25.450	26.611	-20.741	1.00	40.56
ATOM	2083	CG	LEU A 970	-25.011	28.089	-20.768	1.00	37.75
ATOM	2084	CD1	LEU A 970	-24.376	28.470	-19.459	1.00	37.42
ATOM	2085	CD2	LEU A 970	-24.058	28.329	-21.906	1.00	32.61
ATOM	2086	N	ALA A 971	-27.207	24.079	-21.134	1.00	41.36
ATOM	2087	CA	ALA A 971	-27.350	22.634	-21.175	1.00	42.61
ATOM	2088	C	ALA A 971	-27.934	22.243	-22.518	1.00	44.03
ATOM	2089	O	ALA A 971	-27.470	21.309	-23.162	1.00	44.82
ATOM	2090	CB	ALA A 971	-28.252	22.168	-20.074	1.00	42.94
ATOM	2091	N	ALA A 972	-28.948	22.980	-22.941	1.00	43.93
ATOM	2092	CA	ALA A 972	-29.600	22.705	-24.200	1.00	46.31
ATOM	2093	C	ALA A 972	-28.675	22.874	-25.411	1.00	49.37
ATOM	2094	O	ALA A 972	-28.638	22.013	-26.300	1.00	51.33
ATOM	2095	CB	ALA A 972	-30.825	23.601	-24.342	1.00	43.28
ATOM	2096	N	GLU A 973	-27.934	23.976	-25.454	1.00	50.72
ATOM	2097	CA	GLU A 973	-27.045	24.243	-26.580	1.00	52.77
ATOM	2098	C	GLU A 973	-25.930	23.205	-26.699	1.00	51.88
ATOM	2099	O	GLU A 973	-25.721	22.643	-27.768	1.00	52.95
ATOM	2100	CB	GLU A 973	-26.463	25.662	-26.450	1.00	57.46
ATOM	2101	CG	GLU A 973	-25.475	26.119	-27.540	1.00	62.52
ATOM	2102	CD	GLU A 973	-26.081	26.196	-28.944	1.00	67.05

ATOM	2103	OE1 GLU A 973	-27.304	26.435	-29.067	1.00	69.19
ATOM	2104	OE2 GLU A 973	-25.323	26.032	-29.930	1.00	68.06
ATOM	2105	N PHE A 974	-25.219	22.935	-25.609	1.00	49.75
ATOM	2106	CA PHE A 974	-24.134	21.965	-25.679	1.00	48.22
ATOM	2107	C PHE A 974	-24.698	20.605	-25.979	1.00	47.87
ATOM	2108	O PHE A 974	-24.088	19.806	-26.678	1.00	47.01
ATOM	2109	CB PHE A 974	-23.345	21.938	-24.374	1.00	46.42
ATOM	2110	CG PHE A 974	-22.362	23.053	-24.258	1.00	47.75
ATOM	2111	CD1 PHE A 974	-21.276	23.129	-25.128	1.00	48.10
ATOM	2112	CD2 PHE A 974	-22.547	24.071	-23.327	1.00	47.47
ATOM	2113	CE1 PHE A 974	-20.390	24.204	-25.077	1.00	46.79
ATOM	2114	CE2 PHE A 974	-21.673	25.148	-23.270	1.00	47.11
ATOM	2115	CZ PHE A 974	-20.588	25.215	-24.150	1.00	47.33
ATOM	2116	N SER A 975	-25.886	20.360	-25.446	1.00	47.80
ATOM	2117	CA SER A 975	-26.581	19.102	-25.644	1.00	47.24
ATOM	2118	C SER A 975	-26.704	18.813	-27.136	1.00	47.38
ATOM	2119	O SER A 975	-26.389	17.708	-27.588	1.00	47.22
ATOM	2120	CB SER A 975	-27.976	19.182	-25.022	1.00	48.16
ATOM	2121	OG SER A 975	-28.591	17.914	-24.947	1.00	49.36
ATOM	2122	N ARG A 976	-27.158	19.796	-27.910	1.00	45.99
ATOM	2123	CA ARG A 976	-27.301	19.558	-29.335	1.00	46.51
ATOM	2124	C ARG A 976	-25.925	19.475	-30.004	1.00	46.75
ATOM	2125	O ARG A 976	-25.779	18.840	-31.042	1.00	47.59
ATOM	2126	CB ARG A 976	-28.189	20.633	-29.988	1.00	44.73
ATOM	2127	CG ARG A 976	-27.436	21.795	-30.545	1.00	50.21
ATOM	2128	CD ARG A 976	-28.301	22.825	-31.270	1.00	51.39
ATOM	2129	NE ARG A 976	-27.435	23.946	-31.634	1.00	53.87
ATOM	2130	CZ ARG A 976	-26.509	23.885	-32.587	1.00	54.84
ATOM	2131	NH1 ARG A 976	-25.740	24.936	-32.849	1.00	56.13
ATOM	2132	NH2 ARG A 976	-26.383	22.784	-33.313	1.00	52.91
ATOM	2133	N MET A 977	-24.909	20.090	-29.406	1.00	48.59
ATOM	2134	CA MET A 977	-23.562	20.036	-29.979	1.00	50.45
ATOM	2135	C MET A 977	-22.996	18.635	-29.790	1.00	51.16
ATOM	2136	O MET A 977	-22.230	18.140	-30.620	1.00	51.33
ATOM	2137	CB MET A 977	-22.637	21.080	-29.324	1.00	51.44
ATOM	2138	CG MET A 977	-22.833	22.507	-29.861	1.00	54.98
ATOM	2139	SD MET A 977	-22.111	23.823	-28.853	1.00	58.42
ATOM	2140	CE MET A 977	-20.982	24.513	-29.911	1.00	56.62
ATOM	2141	N ALA A 978	-23.399	17.990	-28.703	1.00	51.59
ATOM	2142	CA ALA A 978	-22.938	16.646	-28.395	1.00	52.55
ATOM	2143	C ALA A 978	-23.492	15.596	-29.363	1.00	53.68
ATOM	2144	O ALA A 978	-22.947	14.501	-29.477	1.00	54.76
ATOM	2145	CB ALA A 978	-23.312	16.292	-26.959	1.00	50.13
ATOM	2146	N ARG A 979	-24.573	15.922	-30.058	1.00	55.30
ATOM	2147	CA ARG A 979	-25.156	14.983	-31.006	1.00	58.64

ATOM	2148	C	ARG A 979	-24.312	14.943	-32.279	1.00	59.72
ATOM	2149	O	ARG A 979	-24.554	14.127	-33.166	1.00	60.30
ATOM	2150	CB	ARG A 979	-26.586	15.397	-31.370	1.00	60.38
ATOM	2151	CG	ARG A 979	-27.545	15.474	-30.195	1.00	65.31
ATOM	2152	CD	ARG A 979	-28.864	16.123	-30.604	1.00	67.03
ATOM	2153	NE	ARG A 979	-29.575	16.664	-29.448	1.00	68.78
ATOM	2154	CZ	ARG A 979	-30.539	17.581	-29.516	1.00	70.15
ATOM	2155	NH1	ARG A 979	-30.922	18.067	-30.694	1.00	70.75
ATOM	2156	NH2	ARG A 979	-31.107	18.027	-28.398	1.00	70.11
ATOM	2157	N	ASP A 980	-23.325	15.827	-32.365	1.00	59.38
ATOM	2158	CA	ASP A 980	-22.464	15.903	-33.541	1.00	59.02
ATOM	2159	C	ASP A 980	-21.190	16.645	-33.122	1.00	57.66
ATOM	2160	O	ASP A 980	-20.858	17.709	-33.649	1.00	56.21
ATOM	2161	CB	ASP A 980	-23.215	16.654	-34.649	1.00	60.77
ATOM	2162	CG	ASP A 980	-22.502	16.607	-35.990	1.00	62.49
ATOM	2163	OD1	ASP A 980	-21.643	15.717	-36.183	1.00	64.46
ATOM	2164	OD2	ASP A 980	-22.821	17.456	-36.858	1.00	61.55
ATOM	2165	N	PRO A 981	-20.453	16.066	-32.162	1.00	56.22
ATOM	2166	CA	PRO A 981	-19.208	16.598	-31.598	1.00	55.44
ATOM	2167	C	PRO A 981	-18.084	17.037	-32.535	1.00	53.93
ATOM	2168	O	PRO A 981	-17.492	18.090	-32.323	1.00	53.34
ATOM	2169	CB	PRO A 981	-18.772	15.496	-30.629	1.00	55.07
ATOM	2170	CG	PRO A 981	-19.345	14.262	-31.229	1.00	54.89
ATOM	2171	CD	PRO A 981	-20.718	14.715	-31.637	1.00	55.91
ATOM	2172	N	GLN A 982	-17.773	16.245	-33.556	1.00	54.01
ATOM	2173	CA	GLN A 982	-16.698	16.617	-34.476	1.00	53.13
ATOM	2174	C	GLN A 982	-17.043	17.886	-35.253	1.00	50.44
ATOM	2175	O	GLN A 982	-16.188	18.476	-35.897	1.00	48.82
ATOM	2176	CB	GLN A 982	-16.377	15.470	-35.445	1.00	55.75
ATOM	2177	CG	GLN A 982	-15.535	14.333	-34.851	1.00	59.04
ATOM	2178	CD	GLN A 982	-16.299	13.465	-33.854	1.00	63.65
ATOM	2179	OE1	GLN A 982	-17.524	13.576	-33.721	1.00	65.05
ATOM	2180	NE2	GLN A 982	-15.578	12.605	-33.140	1.00	65.14
ATOM	2181	N	ARG A 983	-18.296	18.311	-35.179	1.00	49.29
ATOM	2182	CA	ARG A 983	-18.716	19.528	-35.861	1.00	49.03
ATOM	2183	C	ARG A 983	-18.482	20.771	-35.012	1.00	47.62
ATOM	2184	O	ARG A 983	-18.549	21.890	-35.514	1.00	48.25
ATOM	2185	CB	ARG A 983	-20.196	19.479	-36.200	1.00	50.98
ATOM	2186	CG	ARG A 983	-20.683	20.768	-36.834	1.00	53.68
ATOM	2187	CD	ARG A 983	-22.171	20.801	-36.932	1.00	55.23
ATOM	2188	NE	ARG A 983	-22.623	21.823	-37.864	1.00	57.30
ATOM	2189	CZ	ARG A 983	-23.903	22.094	-38.081	1.00	58.03
ATOM	2190	NH1	ARG A 983	-24.838	21.416	-37.424	1.00	59.36
ATOM	2191	NH2	ARG A 983	-24.247	23.028	-38.954	1.00	57.21
ATOM	2192	N	TYR A 984	-18.217	20.585	-33.727	1.00	46.14

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ATOM	2193	CA	TYR A 984	-18.005	21.728	-32.860	1.00	46.62
ATOM	2194	C	TYR A 984	-16.629	21.830	-32.178	1.00	45.34
ATOM	2195	O	TYR A 984	-16.165	22.923	-31.866	1.00	44.15
ATOM	2196	CB	TYR A 984	-19.162	21.797	-31.855	1.00	45.73
ATOM	2197	CG	TYR A 984	-20.483	22.095	-32.545	1.00	47.52
ATOM	2198	CD1	TYR A 984	-21.367	21.075	-32.892	1.00	49.29
ATOM	2199	CD2	TYR A 984	-20.816	23.401	-32.920	1.00	47.84
ATOM	2200	CE1	TYR A 984	-22.553	21.352	-33.598	1.00	48.94
ATOM	2201	CE2	TYR A 984	-21.987	23.683	-33.622	1.00	47.24
ATOM	2202	CZ	TYR A 984	-22.847	22.658	-33.957	1.00	48.48
ATOM	2203	OH	TYR A 984	-23.996	22.944	-34.655	1.00	50.81
ATOM	2204	N	LEU A 985	-15.976	20.698	-31.957	1.00	44.95
ATOM	2205	CA	LEU A 985	-14.648	20.689	-31.353	1.00	45.72
ATOM	2206	C	LEU A 985	-13.746	19.932	-32.320	1.00	47.79
ATOM	2207	O	LEU A 985	-14.094	18.836	-32.770	1.00	47.32
ATOM	2208	CB	LEU A 985	-14.672	19.980	-29.997	1.00	44.68
ATOM	2209	CG	LEU A 985	-15.410	20.665	-28.849	1.00	44.43
ATOM	2210	CD1	LEU A 985	-15.243	19.853	-27.574	1.00	43.38
ATOM	2211	CD2	LEU A 985	-14.860	22.079	-28.660	1.00	44.96
ATOM	2212	N	VAL A 986	-12.596	20.510	-32.647	1.00	48.85
ATOM	2213	CA	VAL A 986	-11.679	19.871	-33.582	1.00	49.84
ATOM	2214	C	VAL A 986	-10.398	19.397	-32.911	1.00	51.24
ATOM	2215	O	VAL A 986	-9.426	20.136	-32.805	1.00	51.87
ATOM	2216	CB	VAL A 986	-11.312	20.828	-34.716	1.00	51.14
ATOM	2217	CG1	VAL A 986	-10.392	20.130	-35.709	1.00	50.04
ATOM	2218	CG2	VAL A 986	-12.573	21.325	-35.394	1.00	49.84
ATOM	2219	N	ILE A 987	-10.406	18.146	-32.473	1.00	53.09
ATOM	2220	CA	ILE A 987	-9.267	17.541	-31.797	1.00	52.98
ATOM	2221	C	ILE A 987	-8.535	16.595	-32.736	1.00	55.59
ATOM	2222	O	ILE A 987	-9.155	15.754	-33.392	1.00	53.71
ATOM	2223	CB	ILE A 987	-9.735	16.727	-30.591	1.00	50.88
ATOM	2224	CG1	ILE A 987	-10.571	17.611	-29.665	1.00	52.22
ATOM	2225	CG2	ILE A 987	-8.549	16.124	-29.884	1.00	49.91
ATOM	2226	CD1	ILE A 987	-11.307	16.840	-28.586	1.00	49.45
ATOM	2227	N	GLN A 988	-7.214	16.723	-32.792	1.00	59.02
ATOM	2228	CA	GLN A 988	-6.418	15.860	-33.645	1.00	61.68
ATOM	2229	C	GLN A 988	-6.654	14.424	-33.178	1.00	64.13
ATOM	2230	O	GLN A 988	-6.577	14.127	-31.980	1.00	62.70
ATOM	2231	CB	GLN A 988	-4.946	16.236	-33.528	1.00	63.64
ATOM	2232	CG	GLN A 988	-4.134	15.850	-34.745	1.00	67.15
ATOM	2233	CD	GLN A 988	-2.726	16.407	-34.726	1.00	67.61
ATOM	2234	OE1	GLN A 988	-1.961	16.193	-35.659	1.00	71.31
ATOM	2235	NE2	GLN A 988	-2.378	17.124	-33.665	1.00	70.34
ATOM	2236	N	GLY A 989	-6.947	13.542	-34.131	1.00	66.36
ATOM	2237	CA	GLY A 989	-7.240	12.156	-33.809	1.00	68.95

ATOM	2238	C	GLY A 989	-8.751	12.071	-33.788	1.00	71.82
ATOM	2239	O	GLY A 989	-9.386	12.067	-34.840	1.00	73.55
ATOM	2240	N	ASP A 990	-9.317	12.011	-32.586	1.00	74.05
ATOM	2241	CA	ASP A 990	-10.766	11.986	-32.362	1.00	75.83
ATOM	2242	C	ASP A 990	-11.591	11.562	-33.583	1.00	77.60
ATOM	2243	O	ASP A 990	-12.564	12.219	-33.951	1.00	77.72
ATOM	2244	CB	ASP A 990	-11.194	13.387	-31.870	1.00	73.28
ATOM	2245	CG	ASP A 990	-12.647	13.457	-31.412	1.00	70.03
ATOM	2246	OD1	ASP A 990	-13.121	12.530	-30.715	1.00	70.19
ATOM	2247	OD2	ASP A 990	-13.308	14.466	-31.732	1.00	65.64
ATOM	2248	N	ALA A 991	-11.208	10.456	-34.208	1.00	80.41
ATOM	2249	CA	ALA A 991	-11.936	9.974	-35.374	1.00	83.98
ATOM	2250	C	ALA A 991	-12.676	8.672	-35.059	1.00	86.60
ATOM	2251	O	ALA A 991	-13.837	8.503	-35.441	1.00	87.41
ATOM	2252	CB	ALA A 991	-10.972	9.771	-36.550	1.00	82.75
ATOM	2253	N	ALA A 992	-12.005	7.767	-34.347	1.00	88.48
ATOM	2254	CA	ALA A 992	-12.582	6.471	-33.992	1.00	90.40
ATOM	2255	C	ALA A 992	-12.798	6.298	-32.492	1.00	91.49
ATOM	2256	O	ALA A 992	-13.875	5.784	-32.113	1.00	91.08
ATOM	2257	CB	ALA A 992	-11.694	5.350	-34.516	1.00	90.58
ATOM	2258	OXT	ALA A 992	-11.879	6.655	-31.721	1.00	92.46
ATOM	2259	N	ALA B 694	-21.367	6.079	-64.456	1.00	78.72
ATOM	2260	CA	ALA B 694	-22.190	6.371	-63.252	1.00	78.66
ATOM	2261	C	ALA B 694	-21.358	7.182	-62.263	1.00	78.89
ATOM	2262	O	ALA B 694	-20.424	7.882	-62.653	1.00	79.39
ATOM	2263	CB	ALA B 694	-22.652	5.062	-62.614	1.00	77.87
ATOM	2264	N	ALA B 695	-21.703	7.085	-60.984	1.00	78.95
ATOM	2265	CA	ALA B 695	-20.990	7.791	-59.923	1.00	78.98
ATOM	2266	C	ALA B 695	-20.828	6.832	-58.742	1.00	79.45
ATOM	2267	O	ALA B 695	-21.816	6.296	-58.240	1.00	80.20
ATOM	2268	CB	ALA B 695	-21.775	9.030	-59.498	1.00	77.61
ATOM	2269	N	ALA B 696	-19.588	6.618	-58.305	1.00	79.38
ATOM	2270	CA	ALA B 696	-19.298	5.702	-57.200	1.00	79.53
ATOM	2271	C	ALA B 696	-20.251	5.840	-56.006	1.00	80.35
ATOM	2272	O	ALA B 696	-20.595	6.950	-55.604	1.00	80.03
ATOM	2273	CB	ALA B 696	-17.849	5.883	-56.742	1.00	77.04
ATOM	2274	N	PRO B 697	-20.699	4.701	-55.435	1.00	81.52
ATOM	2275	CA	PRO B 697	-21.611	4.620	-54.284	1.00	81.54
ATOM	2276	C	PRO B 697	-21.046	5.326	-53.053	1.00	82.10
ATOM	2277	O	PRO B 697	-19.916	5.067	-52.635	1.00	82.80
ATOM	2278	CB	PRO B 697	-21.752	3.118	-54.058	1.00	81.54
ATOM	2279	CG	PRO B 697	-21.616	2.564	-55.434	1.00	82.60
ATOM	2280	CD	PRO B 697	-20.452	3.355	-55.987	1.00	82.37
ATOM	2281	N	LEU B 698	-21.845	6.207	-52.467	1.00	81.85
ATOM	2282	CA	LEU B 698	-21.421	6.969	-51.303	1.00	80.76

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ATOM	2283	C	LEU B 698	-21.365	6.109	-50.051	1.00	79.77
ATOM	2284	O	LEU B 698	-21.874	4.994	-50.048	1.00	80.40
ATOM	2285	CB	LEU B 698	-22.383	8.136	-51.093	1.00	80.50
ATOM	2286	CG	LEU B 698	-22.038	9.096	-49.959	1.00	80.61
ATOM	2287	CD1	LEU B 698	-20.711	9.781	-50.243	1.00	80.34
ATOM	2288	CD2	LEU B 698	-23.150	10.118	-49.823	1.00	80.62
ATOM	2289	N	THR B 699	-20.732	6.641	-49.006	1.00	79.28
ATOM	2290	CA	THR B 699	-20.585	5.992	-47.692	1.00	79.67
ATOM	2291	C	THR B 699	-19.385	6.573	-46.938	1.00	78.91
ATOM	2292	O	THR B 699	-18.317	5.969	-46.894	1.00	79.37
ATOM	2293	CB	THR B 699	-20.408	4.444	-47.792	1.00	80.11
ATOM	2294	OG1	THR B 699	-19.202	4.135	-48.503	1.00	80.37
ATOM	2295	CG2	THR B 699	-21.616	3.801	-48.481	1.00	78.91
ATOM	2296	N	PRO B 700	-19.555	7.757	-46.324	1.00	78.42
ATOM	2297	CA	PRO B 700	-18.508	8.454	-45.566	1.00	78.09
ATOM	2298	C	PRO B 700	-17.960	7.713	-44.354	1.00	77.41
ATOM	2299	O	PRO B 700	-18.560	6.759	-43.863	1.00	77.46
ATOM	2300	CB	PRO B 700	-19.182	9.764	-45.176	1.00	77.99
ATOM	2301	CG	PRO B 700	-20.601	9.355	-45.002	1.00	78.57
ATOM	2302	CD	PRO B 700	-20.833	8.482	-46.218	1.00	78.31
ATOM	2303	N	SER B 701	-16.811	8.175	-43.876	1.00	76.96
ATOM	2304	CA	SER B 701	-16.150	7.577	-42.725	1.00	76.79
ATOM	2305	C	SER B 701	-15.878	8.645	-41.676	1.00	76.45
ATOM	2306	O	SER B 701	-16.079	9.838	-41.920	1.00	76.52
ATOM	2307	CB	SER B 701	-14.824	6.944	-43.154	1.00	77.52
ATOM	2308	OG	SER B 701	-13.944	7.924	-43.690	1.00	77.51
ATOM	2309	N	GLY B 702	-15.418	8.221	-40.507	1.00	75.81
ATOM	2310	CA	GLY B 702	-15.123	9.188	-39.466	1.00	75.42
ATOM	2311	C	GLY B 702	-14.011	10.118	-39.912	1.00	73.55
ATOM	2312	O	GLY B 702	-14.195	11.334	-40.015	1.00	73.83
ATOM	2313	N	THR B 703	-12.858	9.521	-40.194	1.00	71.08
ATOM	2314	CA	THR B 703	-11.662	10.227	-40.629	1.00	68.76
ATOM	2315	C	THR B 703	-11.903	11.547	-41.346	1.00	66.14
ATOM	2316	O	THR B 703	-12.657	11.616	-42.309	1.00	66.70
ATOM	2317	CB	THR B 703	-10.826	9.341	-41.553	1.00	70.67
ATOM	2318	OG1	THR B 703	-10.649	8.051	-40.948	1.00	72.31
ATOM	2319	CG2	THR B 703	-9.466	9.982	-41.809	1.00	71.40
ATOM	2320	N	ALA B 704	-11.244	12.596	-40.871	1.00	62.68
ATOM	2321	CA	ALA B 704	-11.370	13.915	-41.469	1.00	59.07
ATOM	2322	C	ALA B 704	-10.277	14.034	-42.529	1.00	57.68
ATOM	2323	O	ALA B 704	-9.333	13.236	-42.556	1.00	56.92
ATOM	2324	CB	ALA B 704	-11.210	14.992	-40.403	1.00	56.44
ATOM	2325	N	PRO B 705	-10.387	15.030	-43.418	1.00	54.82
ATOM	2326	CA	PRO B 705	-9.393	15.215	-44.473	1.00	53.14
ATOM	2327	C	PRO B 705	-8.001	15.562	-43.982	1.00	52.08

ATOM	2328	O	PRO B 705	-7.835	16.297	-43.019	1.00	52.38
ATOM	2329	CB	PRO B 705	-9.995	16.328	-45.317	1.00	53.47
ATOM	2330	CG	PRO B 705	-10.713	17.142	-44.308	1.00	53.49
ATOM	2331	CD	PRO B 705	-11.394	16.102	-43.457	1.00	53.49
ATOM	2332	N	ASN B 706	-7.005	15.018	-44.668	1.00	50.16
ATOM	2333	CA	ASN B 706	-5.614	15.255	-44.352	1.00	47.68
ATOM	2334	C	ASN B 706	-5.141	16.419	-45.220	1.00	48.60
ATOM	2335	O	ASN B 706	-4.817	16.235	-46.394	1.00	47.17
ATOM	2336	CB	ASN B 706	-4.798	14.007	-44.679	1.00	46.68
ATOM	2337	CG	ASN B 706	-3.336	14.152	-44.307	1.00	47.50
ATOM	2338	OD1	ASN B 706	-2.843	15.264	-44.085	1.00	46.16
ATOM	2339	ND2	ASN B 706	-2.624	13.025	-44.252	1.00	47.14
ATOM	2340	N	GLN B 707	-5.089	17.616	-44.654	1.00	48.45
ATOM	2341	CA	GLN B 707	-4.663	18.753	-45.448	1.00	50.34
ATOM	2342	C	GLN B 707	-3.195	19.132	-45.296	1.00	49.32
ATOM	2343	O	GLN B 707	-2.820	20.282	-45.508	1.00	48.81
ATOM	2344	CB	GLN B 707	-5.565	19.961	-45.172	1.00	51.33
ATOM	2345	CG	GLN B 707	-7.017	19.707	-45.534	1.00	54.04
ATOM	2346	CD	GLN B 707	-7.890	20.942	-45.390	1.00	57.85
ATOM	2347	OE1	GLN B 707	-7.874	21.834	-46.244	1.00	59.23
ATOM	2348	NE2	GLN B 707	-8.651	21.007	-44.296	1.00	57.51
ATOM	2349	N	ALA B 708	-2.361	18.160	-44.944	1.00	49.01
ATOM	2350	CA	ALA B 708	-0.930	18.416	-44.814	1.00	49.28
ATOM	2351	C	ALA B 708	-0.402	18.939	-46.153	1.00	50.28
ATOM	2352	O	ALA B 708	-0.927	18.609	-47.216	1.00	50.22
ATOM	2353	CB	ALA B 708	-0.201	17.134	-44.434	1.00	46.73
ATOM	2354	N	GLN B 709	0.635	19.761	-46.102	1.00	52.30
ATOM	2355	CA	GLN B 709	1.209	20.305	-47.320	1.00	53.30
ATOM	2356	C	GLN B 709	2.521	19.639	-47.662	1.00	54.63
ATOM	2357	O	GLN B 709	3.328	19.342	-46.788	1.00	55.25
ATOM	2358	CB	GLN B 709	1.438	21.807	-47.173	1.00	53.77
ATOM	2359	CG	GLN B 709	0.187	22.623	-47.359	1.00	56.18
ATOM	2360	CD	GLN B 709	-0.326	22.555	-48.777	1.00	58.18
ATOM	2361	OE1	GLN B 709	-1.494	22.832	-49.037	1.00	59.37
ATOM	2362	NE2	GLN B 709	0.553	22.197	-49.710	1.00	59.96
ATOM	2363	N	LEU B 710	2.734	19.394	-48.943	1.00	56.61
ATOM	2364	CA	LEU B 710	3.984	18.793	-49.368	1.00	59.18
ATOM	2365	C	LEU B 710	4.565	19.616	-50.508	1.00	59.54
ATOM	2366	O	LEU B 710	4.077	19.563	-51.634	1.00	60.05
ATOM	2367	CB	LEU B 710	3.788	17.341	-49.826	1.00	58.84
ATOM	2368	CG	LEU B 710	5.144	16.673	-50.079	1.00	58.85
ATOM	2369	CD1	LEU B 710	5.941	16.662	-48.780	1.00	56.82
ATOM	2370	CD2	LEU B 710	4.960	15.272	-50.610	1.00	59.31
ATOM	2371	N	ARG B 711	5.602	20.385	-50.201	1.00	59.61
ATOM	2372	CA	ARG B 711	6.249	21.218	-51.199	1.00	59.44

ATOM	2373	C	ARG B 711	7.209	20.387	-52.020	1.00	57.96
ATOM	2374	O	ARG B 711	8.038	19.665	-51.487	1.00	56.87
ATOM	2375	CB	ARG B 711	7.026	22.352	-50.528	1.00	62.07
ATOM	2376	CG	ARG B 711	6.173	23.468	-49.947	1.00	66.77
ATOM	2377	CD	ARG B 711	6.166	24.664	-50.880	1.00	70.76
ATOM	2378	NE	ARG B 711	5.529	25.830	-50.275	1.00	73.86
ATOM	2379	CZ	ARG B 711	5.482	27.030	-50.849	1.00	73.77
ATOM	2380	NH1	ARG B 711	6.038	27.213	-52.039	1.00	71.33
ATOM	2381	NH2	ARG B 711	4.872	28.041	-50.241	1.00	74.12
ATOM	2382	N	ILE B 712	7.073	20.472	-53.331	1.00	58.48
ATOM	2383	CA	ILE B 712	7.968	19.765	-54.221	1.00	59.27
ATOM	2384	C	ILE B 712	8.952	20.858	-54.638	1.00	60.66
ATOM	2385	O	ILE B 712	8.601	21.793	-55.355	1.00	60.01
ATOM	2386	CB	ILE B 712	7.177	19.162	-55.390	1.00	58.30
ATOM	2387	CG1	ILE B 712	6.266	18.066	-54.826	1.00	57.96
ATOM	2388	CG2	ILE B 712	8.117	18.601	-56.448	1.00	56.69
ATOM	2389	CD1	ILE B 712	5.405	17.380	-55.840	1.00	61.91
ATOM	2390	N	LEU B 713	10.178	20.744	-54.139	1.00	60.97
ATOM	2391	CA	LEU B 713	11.201	21.748	-54.374	1.00	61.57
ATOM	2392	C	LEU B 713	12.091	21.583	-55.583	1.00	62.89
ATOM	2393	O	LEU B 713	12.517	20.476	-55.921	1.00	62.63
ATOM	2394	CB	LEU B 713	12.093	21.864	-53.141	1.00	60.62
ATOM	2395	CG	LEU B 713	11.375	21.861	-51.796	1.00	60.72
ATOM	2396	CD1	LEU B 713	12.345	22.362	-50.739	1.00	60.07
ATOM	2397	CD2	LEU B 713	10.134	22.743	-51.848	1.00	58.84
ATOM	2398	N	ALA B 714	12.388	22.713	-56.216	1.00	63.60
ATOM	2399	CA	ALA B 714	13.257	22.724	-57.373	1.00	64.47
ATOM	2400	C	ALA B 714	14.663	22.544	-56.828	1.00	65.36
ATOM	2401	O	ALA B 714	15.049	23.194	-55.857	1.00	64.64
ATOM	2402	CB	ALA B 714	13.136	24.052	-58.115	1.00	65.35
ATOM	2403	N	GLU B 715	15.409	21.642	-57.451	1.00	66.38
ATOM	2404	CA	GLU B 715	16.786	21.337	-57.075	1.00	68.71
ATOM	2405	C	GLU B 715	17.570	22.608	-56.764	1.00	69.58
ATOM	2406	O	GLU B 715	18.489	22.606	-55.945	1.00	70.53
ATOM	2407	CB	GLU B 715	17.451	20.590	-58.233	1.00	71.46
ATOM	2408	CG	GLU B 715	18.838	20.031	-57.972	1.00	75.03
ATOM	2409	CD	GLU B 715	19.366	19.255	-59.174	1.00	78.03
ATOM	2410	OE1	GLU B 715	20.444	18.627	-59.064	1.00	81.21
ATOM	2411	OE2	GLU B 715	18.699	19.275	-60.234	1.00	78.12
ATOM	2412	N	THR B 716	17.178	23.692	-57.422	1.00	69.78
ATOM	2413	CA	THR B 716	17.825	24.987	-57.283	1.00	69.47
ATOM	2414	C	THR B 716	17.451	25.789	-56.041	1.00	69.52
ATOM	2415	O	THR B 716	18.240	26.611	-55.573	1.00	70.64
ATOM	2416	CB	THR B 716	17.536	25.866	-58.513	1.00	70.06
ATOM	2417	OG1	THR B 716	18.171	27.138	-58.351	1.00	71.27

ATOM	2418	CG2 THR B 716	16.036	26.076	-58.678	1.00	69.60
ATOM	2419	N GLU B 717	16.253	25.577	-55.511	1.00	68.00
ATOM	2420	CA GLU B 717	15.845	26.321	-54.330	1.00	66.43
ATOM	2421	C GLU B 717	16.699	25.898	-53.135	1.00	66.27
ATOM	2422	O GLU B 717	16.735	26.588	-52.117	1.00	65.77
ATOM	2423	CB GLU B 717	14.363	26.072	-54.032	1.00	67.50
ATOM	2424	CG GLU B 717	13.430	26.254	-55.234	1.00	67.97
ATOM	2425	CD GLU B 717	11.971	25.930	-54.911	1.00	68.95
ATOM	2426	OE1 GLU B 717	11.314	25.253	-55.736	1.00	69.80
ATOM	2427	OE2 GLU B 717	11.479	26.355	-53.843	1.00	67.07
ATOM	2428	N LEU B 718	17.409	24.778	-53.277	1.00	66.24
ATOM	2429	CA LEU B 718	18.240	24.241	-52.197	1.00	67.00
ATOM	2430	C LEU B 718	19.741	24.416	-52.344	1.00	68.38
ATOM	2431	O LEU B 718	20.308	24.173	-53.410	1.00	68.22
ATOM	2432	CB LEU B 718	17.961	22.746	-51.989	1.00	64.67
ATOM	2433	CG LEU B 718	16.592	22.299	-51.473	1.00	64.09
ATOM	2434	CD1 LEU B 718	16.642	20.805	-51.218	1.00	64.50
ATOM	2435	CD2 LEU B 718	16.221	23.038	-50.196	1.00	61.97
ATOM	2436	N ALA B 719	20.376	24.807	-51.240	1.00	69.63
ATOM	2437	CA ALA B 719	21.820	25.008	-51.188	1.00	70.57
ATOM	2438	C ALA B 719	22.409	24.242	-50.006	1.00	71.59
ATOM	2439	O ALA B 719	21.972	24.404	-48.859	1.00	71.07
ATOM	2440	CB ALA B 719	22.152	26.499	-51.062	1.00	69.58
ATOM	2441	N ARG B 720	23.399	23.404	-50.303	1.00	72.39
ATOM	2442	CA ARG B 720	24.083	22.601	-49.296	1.00	73.45
ATOM	2443	C ARG B 720	25.143	23.436	-48.577	1.00	74.60
ATOM	2444	O ARG B 720	25.385	24.593	-48.911	1.00	75.29
ATOM	2445	CB ARG B 720	24.786	21.414	-49.952	1.00	73.03
ATOM	2446	CG ARG B 720	23.902	20.485	-50.756	1.00	74.45
ATOM	2447	CD ARG B 720	23.856	19.106	-50.118	1.00	75.59
ATOM	2448	NE ARG B 720	23.875	18.018	-51.097	1.00	76.81
ATOM	2449	CZ ARG B 720	22.976	17.855	-52.063	1.00	76.86
ATOM	2450	NH1 ARG B 720	21.972	18.714	-52.198	1.00	76.25
ATOM	2451	NH2 ARG B 720	23.074	16.818	-52.886	1.00	77.66
ATOM	2452	N VAL B 721	25.774	22.831	-47.583	1.00	75.37
ATOM	2453	CA VAL B 721	26.835	23.472	-46.824	1.00	75.73
ATOM	2454	C VAL B 721	27.804	22.356	-46.447	1.00	76.50
ATOM	2455	O VAL B 721	28.600	21.912	-47.275	1.00	76.71
ATOM	2456	CB VAL B 721	26.297	24.148	-45.550	1.00	76.20
ATOM	2457	CG1 VAL B 721	27.451	24.684	-44.722	1.00	76.08
ATOM	2458	CG2 VAL B 721	25.358	25.282	-45.925	1.00	75.75
ATOM	2459	N ALA B 722	27.722	21.889	-45.208	1.00	77.05
ATOM	2460	CA ALA B 722	28.584	20.809	-44.751	1.00	76.34
ATOM	2461	C ALA B 722	27.735	19.558	-44.559	1.00	75.78
ATOM	2462	O ALA B 722	26.537	19.548	-44.868	1.00	75.60

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ATOM	2463	CB	ALA B 722	29.262	21.196	-43.433	1.00	76.05
ATOM	2464	N	VAL B 723	28.373	18.507	-44.053	1.00	74.68
ATOM	2465	CA	VAL B 723	27.714	17.239	-43.777	1.00	71.94
ATOM	2466	C	VAL B 723	27.423	17.159	-42.283	1.00	71.54
ATOM	2467	O	VAL B 723	28.310	17.399	-41.461	1.00	71.55
ATOM	2468	CB	VAL B 723	28.611	16.058	-44.160	1.00	71.07
ATOM	2469	CG1	VAL B 723	28.020	14.767	-43.629	1.00	70.27
ATOM	2470	CG2	VAL B 723	28.764	15.998	-45.672	1.00	71.21
ATOM	2471	N	LEU B 724	26.182	16.836	-41.931	1.00	69.67
ATOM	2472	CA	LEU B 724	25.806	16.721	-40.529	1.00	66.81
ATOM	2473	C	LEU B 724	26.058	15.300	-40.057	1.00	66.43
ATOM	2474	O	LEU B 724	26.094	15.032	-38.859	1.00	68.21
ATOM	2475	CB	LEU B 724	24.334	17.080	-40.347	1.00	64.61
ATOM	2476	CG	LEU B 724	23.992	18.555	-40.555	1.00	64.25
ATOM	2477	CD1	LEU B 724	22.493	18.740	-40.600	1.00	62.81
ATOM	2478	CD2	LEU B 724	24.593	19.379	-39.431	1.00	63.59
ATOM	2479	N	GLY B 725	26.248	14.403	-41.018	1.00	65.74
ATOM	2480	CA	GLY B 725	26.484	13.004	-40.723	1.00	65.55
ATOM	2481	C	GLY B 725	25.812	12.138	-41.777	1.00	67.20
ATOM	2482	O	GLY B 725	24.919	12.602	-42.487	1.00	67.07
ATOM	2483	N	SER B 726	26.241	10.884	-41.888	1.00	68.22
ATOM	2484	CA	SER B 726	25.668	9.957	-42.860	1.00	69.48
ATOM	2485	C	SER B 726	25.632	8.553	-42.275	1.00	70.10
ATOM	2486	O	SER B 726	26.012	8.344	-41.126	1.00	71.12
ATOM	2487	CB	SER B 726	26.504	9.935	-44.139	1.00	70.71
ATOM	2488	OG	SER B 726	27.715	9.214	-43.947	1.00	71.56
ATOM	2489	N	GLY B 727	25.186	7.593	-43.079	1.00	71.04
ATOM	2490	CA	GLY B 727	25.109	6.217	-42.623	1.00	72.17
ATOM	2491	C	GLY B 727	24.190	5.350	-43.469	1.00	72.74
ATOM	2492	O	GLY B 727	23.941	5.645	-44.642	1.00	73.49
ATOM	2493	N	ALA B 728	23.683	4.280	-42.865	1.00	72.58
ATOM	2494	CA	ALA B 728	22.794	3.342	-43.539	1.00	72.96
ATOM	2495	C	ALA B 728	21.657	4.049	-44.263	1.00	74.25
ATOM	2496	O	ALA B 728	21.285	3.682	-45.381	1.00	73.50
ATOM	2497	CB	ALA B 728	22.226	2.361	-42.527	1.00	71.89
ATOM	2498	N	PHE B 729	21.110	5.071	-43.618	1.00	76.13
ATOM	2499	CA	PHE B 729	20.003	5.825	-44.186	1.00	78.00
ATOM	2500	C	PHE B 729	20.488	7.116	-44.823	1.00	78.39
ATOM	2501	O	PHE B 729	20.531	8.153	-44.167	1.00	80.61
ATOM	2502	CB	PHE B 729	18.980	6.125	-43.091	1.00	78.54
ATOM	2503	CG	PHE B 729	18.734	4.958	-42.176	1.00	80.05
ATOM	2504	CD1	PHE B 729	19.552	4.741	-41.067	1.00	80.31
ATOM	2505	CD2	PHE B 729	17.731	4.029	-42.464	1.00	80.12
ATOM	2506	CE1	PHE B 729	19.379	3.613	-40.258	1.00	79.48
ATOM	2507	CE2	PHE B 729	17.551	2.902	-41.666	1.00	79.41

ATOM	2508	CZ	PHE B 729	18.378	2.694	-40.561	1.00	80.03
ATOM	2509	N	GLY B 730	20.867	7.040	-46.098	1.00	77.21
ATOM	2510	CA	GLY B 730	21.343	8.209	-46.819	1.00	75.57
ATOM	2511	C	GLY B 730	22.288	9.121	-46.055	1.00	74.55
ATOM	2512	O	GLY B 730	22.876	8.721	-45.051	1.00	74.34
ATOM	2513	N	THR B 731	22.447	10.349	-46.540	1.00	73.71
ATOM	2514	CA	THR B 731	23.322	11.316	-45.887	1.00	72.89
ATOM	2515	C	THR B 731	22.575	12.607	-45.597	1.00	72.69
ATOM	2516	O	THR B 731	21.765	13.069	-46.406	1.00	72.79
ATOM	2517	CB	THR B 731	24.547	11.650	-46.751	1.00	73.00
ATOM	2518	OG1	THR B 731	25.364	10.484	-46.894	1.00	72.99
ATOM	2519	CG2	THR B 731	25.367	12.753	-46.100	1.00	72.78
ATOM	2520	N	VAL B 732	22.854	13.186	-44.434	1.00	72.09
ATOM	2521	CA	VAL B 732	22.204	14.422	-44.025	1.00	71.72
ATOM	2522	C	VAL B 732	23.109	15.616	-44.283	1.00	71.79
ATOM	2523	O	VAL B 732	24.312	15.553	-44.053	1.00	73.24
ATOM	2524	CB	VAL B 732	21.817	14.385	-42.525	1.00	71.31
ATOM	2525	CG1	VAL B 732	21.170	15.704	-42.124	1.00	70.14
ATOM	2526	CG2	VAL B 732	20.858	13.220	-42.256	1.00	69.55
ATOM	2527	N	TYR B 733	22.517	16.703	-44.762	1.00	71.37
ATOM	2528	CA	TYR B 733	23.256	17.915	-45.072	1.00	70.26
ATOM	2529	C	TYR B 733	22.636	19.144	-44.437	1.00	70.40
ATOM	2530	O	TYR B 733	21.423	19.328	-44.475	1.00	69.19
ATOM	2531	CB	TYR B 733	23.280	18.136	-46.581	1.00	71.02
ATOM	2532	CG	TYR B 733	24.205	17.228	-47.350	1.00	72.14
ATOM	2533	CD1	TYR B 733	25.552	17.550	-47.516	1.00	72.40
ATOM	2534	CD2	TYR B 733	23.733	16.051	-47.928	1.00	72.72
ATOM	2535	CE1	TYR B 733	26.403	16.722	-48.244	1.00	72.86
ATOM	2536	CE2	TYR B 733	24.573	15.215	-48.654	1.00	72.43
ATOM	2537	CZ	TYR B 733	25.904	15.556	-48.807	1.00	72.95
ATOM	2538	OH	TYR B 733	26.734	14.728	-49.519	1.00	73.75
ATOM	2539	N	LYS B 734	23.468	19.988	-43.845	1.00	71.52
ATOM	2540	CA	LYS B 734	22.971	21.235	-43.278	1.00	71.70
ATOM	2541	C	LYS B 734	22.836	22.110	-44.526	1.00	70.70
ATOM	2542	O	LYS B 734	23.636	21.981	-45.457	1.00	69.26
ATOM	2543	CB	LYS B 734	24.000	21.843	-42.323	1.00	72.03
ATOM	2544	CG	LYS B 734	23.619	23.219	-41.810	1.00	73.15
ATOM	2545	CD	LYS B 734	24.811	23.927	-41.173	1.00	74.86
ATOM	2546	CE	LYS B 734	24.469	25.371	-40.815	1.00	75.25
ATOM	2547	NZ	LYS B 734	25.609	26.084	-40.177	1.00	75.36
ATOM	2548	N	GLY B 735	21.836	22.983	-44.570	1.00	69.60
ATOM	2549	CA	GLY B 735	21.694	23.804	-45.757	1.00	70.34
ATOM	2550	C	GLY B 735	20.674	24.921	-45.717	1.00	70.22
ATOM	2551	O	GLY B 735	20.003	25.146	-44.709	1.00	70.41
ATOM	2552	N	ILE B 736	20.559	25.626	-46.835	1.00	70.46

ATOM	2553	CA	ILE B 736	19.619	26.730	-46.932	1.00	71.88
ATOM	2554	C	ILE B 736	18.619	26.490	-48.053	1.00	70.97
ATOM	2555	O	ILE B 736	18.988	26.084	-49.158	1.00	70.48
ATOM	2556	CB	ILE B 736	20.344	28.065	-47.216	1.00	73.37
ATOM	2557	CG1	ILE B 736	21.503	28.253	-46.232	1.00	75.08
ATOM	2558	CG2	ILE B 736	19.359	29.225	-47.099	1.00	72.22
ATOM	2559	CD1	ILE B 736	22.363	29.482	-46.523	1.00	77.81
ATOM	2560	N	TRP B 737	17.349	26.734	-47.756	1.00	69.75
ATOM	2561	CA	TRP B 737	16.301	26.571	-48.746	1.00	69.68
ATOM	2562	C	TRP B 737	15.679	27.924	-49.044	1.00	71.04
ATOM	2563	O	TRP B 737	15.167	28.593	-48.142	1.00	70.73
ATOM	2564	CB	TRP B 737	15.219	25.612	-48.247	1.00	67.06
ATOM	2565	CG	TRP B 737	13.973	25.642	-49.085	1.00	63.60
ATOM	2566	CD1	TRP B 737	13.900	25.681	-50.449	1.00	62.26
ATOM	2567	CD2	TRP B 737	12.623	25.615	-48.614	1.00	62.62
ATOM	2568	NE1	TRP B 737	12.589	25.683	-50.857	1.00	61.65
ATOM	2569	CE2	TRP B 737	11.783	25.641	-49.752	1.00	61.65
ATOM	2570	CE3	TRP B 737	12.041	25.567	-47.342	1.00	62.03
ATOM	2571	CZ2	TRP B 737	10.393	25.621	-49.658	1.00	61.01
ATOM	2572	CZ3	TRP B 737	10.657	25.545	-47.246	1.00	63.21
ATOM	2573	CH2	TRP B 737	9.847	25.573	-48.402	1.00	62.84
ATOM	2574	N	VAL B 738	15.727	28.320	-50.313	1.00	71.93
ATOM	2575	CA	VAL B 738	15.162	29.590	-50.738	1.00	72.89
ATOM	2576	C	VAL B 738	13.895	29.317	-51.539	1.00	74.11
ATOM	2577	O	VAL B 738	13.960	29.000	-52.722	1.00	74.51
ATOM	2578	CB	VAL B 738	16.155	30.357	-51.614	1.00	73.24
ATOM	2579	CG1	VAL B 738	15.753	31.811	-51.677	1.00	72.41
ATOM	2580	CG2	VAL B 738	17.573	30.189	-51.067	1.00	71.96
ATOM	2581	N	PRO B 739	12.723	29.441	-50.898	1.00	75.71
ATOM	2582	CA	PRO B 739	11.408	29.212	-51.504	1.00	78.23
ATOM	2583	C	PRO B 739	11.246	29.754	-52.922	1.00	80.64
ATOM	2584	O	PRO B 739	11.912	30.716	-53.309	1.00	80.64
ATOM	2585	CB	PRO B 739	10.462	29.882	-50.518	1.00	77.56
ATOM	2586	CG	PRO B 739	11.135	29.618	-49.210	1.00	77.83
ATOM	2587	CD	PRO B 739	12.574	29.957	-49.527	1.00	76.20
ATOM	2588	N	ALA B 740	10.348	29.128	-53.682	1.00	83.02
ATOM	2589	CA	ALA B 740	10.077	29.521	-55.062	1.00	84.99
ATOM	2590	C	ALA B 740	9.540	30.948	-55.142	1.00	86.49
ATOM	2591	O	ALA B 740	8.328	31.168	-55.063	1.00	87.30
ATOM	2592	CB	ALA B 740	9.080	28.554	-55.695	1.00	84.35
ATOM	2593	N	GLY B 741	10.449	31.912	-55.293	1.00	87.21
ATOM	2594	CA	GLY B 741	10.048	33.306	-55.390	1.00	88.15
ATOM	2595	C	GLY B 741	10.039	34.051	-54.069	1.00	88.91
ATOM	2596	O	GLY B 741	9.134	34.841	-53.796	1.00	89.07
ATOM	2597	N	GLU B 742	11.051	33.804	-53.245	1.00	89.01

ATOM	2598	CA	GLU B 742	11.146	34.460	-51.949	1.00	89.25
ATOM	2599	C	GLU B 742	12.605	34.733	-51.597	1.00	89.18
ATOM	2600	O	GLU B 742	13.514	34.121	-52.163	1.00	87.36
ATOM	2601	CB	GLU B 742	10.486	33.592	-50.874	1.00	89.33
ATOM	2602	CG	GLU B 742	9.030	33.270	-51.166	1.00	89.86
ATOM	2603	CD	GLU B 742	8.394	32.409	-50.096	1.00	91.41
ATOM	2604	OE1	GLU B 742	7.217	32.022	-50.259	1.00	92.46
ATOM	2605	OE2	GLU B 742	9.068	32.116	-49.089	1.00	91.98
ATOM	2606	N	ALA B 743	12.818	35.659	-50.664	1.00	89.63
ATOM	2607	CA	ALA B 743	14.163	36.037	-50.241	1.00	89.61
ATOM	2608	C	ALA B 743	14.626	35.259	-49.016	1.00	89.33
ATOM	2609	O	ALA B 743	15.813	34.951	-48.884	1.00	89.32
ATOM	2610	CB	ALA B 743	14.219	37.538	-49.956	1.00	88.93
ATOM	2611	N	VAL B 744	13.692	34.944	-48.122	1.00	88.36
ATOM	2612	CA	VAL B 744	14.016	34.203	-46.902	1.00	86.73
ATOM	2613	C	VAL B 744	14.987	33.060	-47.185	1.00	85.49
ATOM	2614	O	VAL B 744	14.800	32.293	-48.129	1.00	86.20
ATOM	2615	CB	VAL B 744	12.744	33.615	-46.239	1.00	86.40
ATOM	2616	CG1	VAL B 744	11.827	34.737	-45.777	1.00	86.46
ATOM	2617	CG2	VAL B 744	12.018	32.709	-47.217	1.00	86.17
ATOM	2618	N	ALA B 745	16.033	32.959	-46.373	1.00	83.22
ATOM	2619	CA	ALA B 745	17.020	31.901	-46.537	1.00	80.32
ATOM	2620	C	ALA B 745	16.858	30.887	-45.402	1.00	78.54
ATOM	2621	O	ALA B 745	17.722	30.780	-44.537	1.00	77.78
ATOM	2622	CB	ALA B 745	18.426	32.497	-46.528	1.00	79.74
ATOM	2623	N	ILE B 746	15.742	30.154	-45.415	1.00	76.18
ATOM	2624	CA	ILE B 746	15.427	29.144	-44.394	1.00	73.00
ATOM	2625	C	ILE B 746	16.506	28.085	-44.148	1.00	70.60
ATOM	2626	O	ILE B 746	16.926	27.379	-45.068	1.00	70.94
ATOM	2627	CB	ILE B 746	14.133	28.384	-44.740	1.00	73.31
ATOM	2628	CG1	ILE B 746	12.939	29.338	-44.735	1.00	74.65
ATOM	2629	CG2	ILE B 746	13.906	27.271	-43.733	1.00	73.54
ATOM	2630	CD1	ILE B 746	11.630	28.690	-45.169	1.00	74.90
ATOM	2631	N	PRO B 747	16.963	27.959	-42.890	1.00	68.46
ATOM	2632	CA	PRO B 747	17.991	26.973	-42.542	1.00	66.18
ATOM	2633	C	PRO B 747	17.322	25.609	-42.442	1.00	63.94
ATOM	2634	O	PRO B 747	16.327	25.441	-41.727	1.00	62.47
ATOM	2635	CB	PRO B 747	18.499	27.475	-41.198	1.00	65.24
ATOM	2636	CG	PRO B 747	17.258	28.014	-40.581	1.00	65.83
ATOM	2637	CD	PRO B 747	16.625	28.788	-41.718	1.00	67.44
ATOM	2638	N	VAL B 748	17.864	24.638	-43.162	1.00	61.19
ATOM	2639	CA	VAL B 748	17.273	23.316	-43.161	1.00	60.40
ATOM	2640	C	VAL B 748	18.273	22.179	-43.190	1.00	60.05
ATOM	2641	O	VAL B 748	19.484	22.383	-43.273	1.00	59.27
ATOM	2642	CB	VAL B 748	16.346	23.121	-44.382	1.00	60.82

ATOM	2643	CG1 VAL B 748	15.250	24.166	-44.384	1.00	60.94
ATOM	2644	CG2 VAL B 748	17.159	23.192	-45.662	1.00	58.19
ATOM	2645	N ALA B 749	17.726	20.973	-43.110	1.00	59.07
ATOM	2646	CA ALA B 749	18.503	19.757	-43.177	1.00	59.25
ATOM	2647	C ALA B 749	18.025	19.161	-44.489	1.00	60.46
ATOM	2648	O ALA B 749	16.899	19.422	-44.910	1.00	61.58
ATOM	2649	CB ALA B 749	18.159	18.837	-42.019	1.00	57.97
ATOM	2650	N ILE B 750	18.881	18.388	-45.144	1.00	60.55
ATOM	2651	CA ILE B 750	18.536	17.762	-46.407	1.00	59.69
ATOM	2652	C ILE B 750	19.113	16.364	-46.376	1.00	60.35
ATOM	2653	O ILE B 750	20.304	16.182	-46.120	1.00	59.91
ATOM	2654	CB ILE B 750	19.152	18.519	-47.593	1.00	60.90
ATOM	2655	CG1 ILE B 750	18.855	20.014	-47.470	1.00	61.45
ATOM	2656	CG2 ILE B 750	18.593	17.976	-48.898	1.00	61.29
ATOM	2657	CD1 ILE B 750	19.552	20.868	-48.512	1.00	62.03
ATOM	2658	N LYS B 751	18.272	15.373	-46.629	1.00	60.64
ATOM	2659	CA LYS B 751	18.736	14.003	-46.608	1.00	61.71
ATOM	2660	C LYS B 751	18.568	13.371	-47.970	1.00	64.10
ATOM	2661	O LYS B 751	17.569	13.593	-48.652	1.00	63.74
ATOM	2662	CB LYS B 751	17.962	13.216	-45.557	1.00	60.11
ATOM	2663	CG LYS B 751	18.422	11.788	-45.379	1.00	58.61
ATOM	2664	CD LYS B 751	17.930	11.241	-44.049	1.00	58.06
ATOM	2665	CE LYS B 751	18.424	9.840	-43.818	1.00	56.70
ATOM	2666	NZ LYS B 751	18.112	9.366	-42.448	1.00	57.25
ATOM	2667	N ILE B 752	19.562	12.590	-48.367	1.00	67.30
ATOM	2668	CA ILE B 752	19.532	11.909	-49.650	1.00	70.25
ATOM	2669	C ILE B 752	19.714	10.425	-49.393	1.00	71.94
ATOM	2670	O ILE B 752	20.740	10.013	-48.867	1.00	73.06
ATOM	2671	CB ILE B 752	20.666	12.407	-50.556	1.00	70.74
ATOM	2672	CG1 ILE B 752	20.578	13.930	-50.705	1.00	70.64
ATOM	2673	CG2 ILE B 752	20.578	11.721	-51.912	1.00	71.95
ATOM	2674	CD1 ILE B 752	21.674	14.538	-51.555	1.00	69.52
ATOM	2675	N ALA B 753	18.723	9.623	-49.760	1.00	74.71
ATOM	2676	CA ALA B 753	18.799	8.185	-49.536	1.00	78.36
ATOM	2677	C ALA B 753	19.570	7.481	-50.639	1.00	81.19
ATOM	2678	O ALA B 753	19.369	7.757	-51.821	1.00	81.29
ATOM	2679	CB ALA B 753	17.399	7.601	-49.423	1.00	77.47
ATOM	2680	N VAL B 754	20.453	6.570	-50.238	1.00	85.07
ATOM	2681	CA VAL B 754	21.281	5.798	-51.170	1.00	88.42
ATOM	2682	C VAL B 754	20.468	5.271	-52.358	1.00	90.41
ATOM	2683	O VAL B 754	19.817	4.229	-52.260	1.00	91.29
ATOM	2684	CB VAL B 754	21.940	4.581	-50.459	1.00	88.45
ATOM	2685	CG1 VAL B 754	23.015	3.969	-51.357	1.00	86.93
ATOM	2686	CG2 VAL B 754	22.519	5.009	-49.108	1.00	88.93
ATOM	2687	N ALA B 755	20.517	5.991	-53.477	1.00	91.96

ATOM	2688	CA	ALA B 755	19.789	5.605	-54.684	1.00	93.14
ATOM	2689	CB	ALA B 755	20.303	6.403	-55.878	1.00	92.70
ATOM	2690	C	ALA B 755	19.890	4.104	-54.975	1.00	94.28
ATOM	2691	OT1	ALA B 755	18.831	3.482	-55.224	1.00	94.26
ATOM	2692	OT2	ALA B 755	21.023	3.569	-54.962	1.00	94.42
ATOM	2693	N	ALA B 761	9.723	1.143	-56.947	1.00	87.14
ATOM	2694	CA	ALA B 761	10.011	1.599	-55.557	1.00	87.01
ATOM	2695	C	ALA B 761	9.596	3.053	-55.300	1.00	87.49
ATOM	2696	O	ALA B 761	9.028	3.358	-54.254	1.00	88.29
ATOM	2697	CB	ALA B 761	11.492	1.420	-55.252	1.00	86.17
ATOM	2698	N	ASN B 762	9.879	3.946	-56.245	1.00	87.30
ATOM	2699	CA	ASN B 762	9.532	5.358	-56.091	1.00	86.68
ATOM	2700	C	ASN B 762	8.123	5.587	-55.563	1.00	85.76
ATOM	2701	O	ASN B 762	7.796	6.676	-55.095	1.00	85.55
ATOM	2702	CB	ASN B 762	9.711	6.095	-57.417	1.00	87.83
ATOM	2703	CG	ASN B 762	11.145	6.515	-57.652	1.00	88.91
ATOM	2704	OD1	ASN B 762	12.065	5.696	-57.587	1.00	88.14
ATOM	2705	ND2	ASN B 762	11.347	7.800	-57.923	1.00	89.08
ATOM	2706	N	VAL B 763	7.288	4.559	-55.645	1.00	84.95
ATOM	2707	CA	VAL B 763	5.919	4.652	-55.152	1.00	83.59
ATOM	2708	C	VAL B 763	5.981	4.500	-53.634	1.00	82.82
ATOM	2709	O	VAL B 763	5.380	5.277	-52.891	1.00	82.67
ATOM	2710	CB	VAL B 763	5.039	3.517	-55.713	1.00	83.22
ATOM	2711	CG1	VAL B 763	3.574	3.913	-55.639	1.00	83.32
ATOM	2712	CG2	VAL B 763	5.452	3.190	-57.134	1.00	83.28
ATOM	2713	N	ALA B 764	6.723	3.485	-53.192	1.00	81.06
ATOM	2714	CA	ALA B 764	6.899	3.188	-51.774	1.00	79.39
ATOM	2715	C	ALA B 764	7.374	4.428	-51.024	1.00	77.74
ATOM	2716	O	ALA B 764	7.068	4.616	-49.841	1.00	77.59
ATOM	2717	CB	ALA B 764	7.911	2.048	-51.601	1.00	78.81
ATOM	2718	N	PHE B 765	8.124	5.269	-51.727	1.00	75.13
ATOM	2719	CA	PHE B 765	8.653	6.497	-51.156	1.00	72.04
ATOM	2720	C	PHE B 765	7.617	7.621	-51.141	1.00	69.21
ATOM	2721	O	PHE B 765	7.398	8.271	-50.120	1.00	67.19
ATOM	2722	CB	PHE B 765	9.890	6.937	-51.939	1.00	72.95
ATOM	2723	CG	PHE B 765	10.256	8.364	-51.716	1.00	74.51
ATOM	2724	CD1	PHE B 765	9.604	9.378	-52.416	1.00	76.66
ATOM	2725	CD2	PHE B 765	11.187	8.708	-50.749	1.00	74.99
ATOM	2726	CE1	PHE B 765	9.868	10.717	-52.152	1.00	76.83
ATOM	2727	CE2	PHE B 765	11.460	10.042	-50.474	1.00	76.87
ATOM	2728	CZ	PHE B 765	10.797	11.053	-51.177	1.00	77.47
ATOM	2729	N	MET B 766	6.989	7.858	-52.281	1.00	67.05
ATOM	2730	CA	MET B 766	5.990	8.903	-52.362	1.00	66.91
ATOM	2731	C	MET B 766	4.876	8.664	-51.351	1.00	66.11
ATOM	2732	O	MET B 766	4.201	9.598	-50.924	1.00	66.81

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ATOM	2733	CB	MET B 766	5.412	8.975	-53.778	1.00	68.18
ATOM	2734	CG	MET B 766	6.425	9.399	-54.826	1.00	68.28
ATOM	2735	SD	MET B 766	7.326	10.874	-54.318	1.00	68.93
ATOM	2736	CE	MET B 766	6.095	12.100	-54.463	1.00	67.19
ATOM	2737	N	ASP B 767	4.678	7.412	-50.966	1.00	64.47
ATOM	2738	CA	ASP B 767	3.642	7.109	-49.997	1.00	63.79
ATOM	2739	C	ASP B 767	4.142	7.370	-48.587	1.00	61.82
ATOM	2740	O	ASP B 767	3.420	7.922	-47.761	1.00	61.10
ATOM	2741	CB	ASP B 767	3.186	5.660	-50.146	1.00	67.06
ATOM	2742	CG	ASP B 767	2.150	5.490	-51.246	1.00	70.14
ATOM	2743	OD1	ASP B 767	1.000	5.939	-51.059	1.00	71.60
ATOM	2744	OD2	ASP B 767	2.484	4.917	-52.304	1.00	73.46
ATOM	2745	N	GLU B 768	5.385	6.984	-48.320	1.00	60.15
ATOM	2746	CA	GLU B 768	5.978	7.194	-47.008	1.00	58.81
ATOM	2747	C	GLU B 768	6.184	8.689	-46.770	1.00	57.14
ATOM	2748	O	GLU B 768	6.001	9.184	-45.654	1.00	54.76
ATOM	2749	CB	GLU B 768	7.319	6.459	-46.906	1.00	61.07
ATOM	2750	CG	GLU B 768	7.904	6.444	-45.495	1.00	64.70
ATOM	2751	CD	GLU B 768	7.060	5.642	-44.506	1.00	66.61
ATOM	2752	OE1	GLU B 768	7.238	5.825	-43.283	1.00	68.31
ATOM	2753	OE2	GLU B 768	6.227	4.823	-44.948	1.00	66.65
ATOM	2754	N	ALA B 769	6.553	9.405	-47.829	1.00	55.28
ATOM	2755	CA	ALA B 769	6.773	10.841	-47.736	1.00	54.43
ATOM	2756	C	ALA B 769	5.491	11.555	-47.326	1.00	54.12
ATOM	2757	O	ALA B 769	5.535	12.625	-46.717	1.00	56.14
ATOM	2758	CB	ALA B 769	7.274	11.385	-49.065	1.00	53.75
ATOM	2759	N	LEU B 770	4.346	10.970	-47.657	1.00	52.05
ATOM	2760	CA	LEU B 770	3.077	11.576	-47.287	1.00	51.69
ATOM	2761	C	LEU B 770	2.921	11.494	-45.774	1.00	51.45
ATOM	2762	O	LEU B 770	2.470	12.440	-45.125	1.00	52.01
ATOM	2763	CB	LEU B 770	1.910	10.864	-47.991	1.00	52.43
ATOM	2764	CG	LEU B 770	0.511	11.393	-47.636	1.00	53.86
ATOM	2765	CD1	LEU B 770	-0.417	11.306	-48.839	1.00	54.92
ATOM	2766	CD2	LEU B 770	-0.041	10.608	-46.450	1.00	52.30
ATOM	2767	N	ILE B 771	3.307	10.357	-45.211	1.00	50.57
ATOM	2768	CA	ILE B 771	3.216	10.175	-43.775	1.00	50.50
ATOM	2769	C	ILE B 771	4.203	11.092	-43.060	1.00	50.19
ATOM	2770	O	ILE B 771	3.883	11.700	-42.047	1.00	51.29
ATOM	2771	CB	ILE B 771	3.511	8.726	-43.377	1.00	50.14
ATOM	2772	CG1	ILE B 771	2.554	7.778	-44.105	1.00	51.79
ATOM	2773	CG2	ILE B 771	3.340	8.569	-41.885	1.00	48.70
ATOM	2774	CD1	ILE B 771	1.078	8.018	-43.775	1.00	51.92
ATOM	2775	N	MET B 772	5.409	11.197	-43.587	1.00	50.96
ATOM	2776	CA	MET B 772	6.395	12.056	-42.962	1.00	52.41
ATOM	2777	C	MET B 772	5.918	13.499	-42.960	1.00	53.45

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ATOM	2778	O	MET B 772	6.222	14.262	-42.053	1.00	56.84
ATOM	2779	CB	MET B 772	7.727	11.960	-43.698	1.00	51.86
ATOM	2780	CG	MET B 772	8.323	10.581	-43.694	1.00	51.45
ATOM	2781	SD	MET B 772	9.869	10.566	-44.572	1.00	54.95
ATOM	2782	CE	MET B 772	10.510	8.976	-44.043	1.00	57.12
ATOM	2783	N	ALA B 773	5.156	13.875	-43.971	1.00	53.69
ATOM	2784	CA	ALA B 773	4.680	15.240	-44.048	1.00	53.73
ATOM	2785	C	ALA B 773	3.350	15.455	-43.331	1.00	53.40
ATOM	2786	O	ALA B 773	2.955	16.588	-43.076	1.00	54.15
ATOM	2787	CB	ALA B 773	4.567	15.651	-45.512	1.00	55.36
ATOM	2788	N	SER B 774	2.653	14.380	-42.995	1.00	53.47
ATOM	2789	CA	SER B 774	1.370	14.536	-42.321	1.00	54.15
ATOM	2790	C	SER B 774	1.499	14.673	-40.805	1.00	54.10
ATOM	2791	O	SER B 774	0.512	14.933	-40.126	1.00	55.42
ATOM	2792	CB	SER B 774	0.457	13.352	-42.637	1.00	54.46
ATOM	2793	OG	SER B 774	0.363	13.121	-44.027	1.00	57.39
ATOM	2794	N	MET B 775	2.705	14.509	-40.275	1.00	53.87
ATOM	2795	CA	MET B 775	2.924	14.594	-38.830	1.00	54.89
ATOM	2796	C	MET B 775	2.843	15.992	-38.190	1.00	54.27
ATOM	2797	O	MET B 775	3.665	16.858	-38.460	1.00	54.83
ATOM	2798	CB	MET B 775	4.265	13.946	-38.496	1.00	55.60
ATOM	2799	CG	MET B 775	4.357	12.524	-39.000	1.00	57.72
ATOM	2800	SD	MET B 775	2.881	11.559	-38.576	1.00	63.74
ATOM	2801	CE	MET B 775	3.577	10.256	-37.670	1.00	57.19
ATOM	2802	N	ASP B 776	1.853	16.194	-37.323	1.00	54.06
ATOM	2803	CA	ASP B 776	1.660	17.475	-36.645	1.00	53.45
ATOM	2804	C	ASP B 776	1.627	17.322	-35.119	1.00	52.22
ATOM	2805	O	ASP B 776	0.565	17.293	-34.493	1.00	51.95
ATOM	2806	CB	ASP B 776	0.369	18.136	-37.133	1.00	55.05
ATOM	2807	CG	ASP B 776	0.193	19.550	-36.595	1.00	57.95
ATOM	2808	OD1	ASP B 776	1.211	20.168	-36.195	1.00	56.53
ATOM	2809	OD2	ASP B 776	-0.961	20.046	-36.589	1.00	56.88
ATOM	2810	N	HIS B 777	2.810	17.234	-34.529	1.00	50.34
ATOM	2811	CA	HIS B 777	2.948	17.073	-33.094	1.00	47.37
ATOM	2812	C	HIS B 777	4.238	17.764	-32.718	1.00	47.49
ATOM	2813	O	HIS B 777	5.264	17.580	-33.374	1.00	45.96
ATOM	2814	CB	HIS B 777	3.009	15.589	-32.737	1.00	45.58
ATOM	2815	CG	HIS B 777	3.097	15.319	-31.268	1.00	45.70
ATOM	2816	ND1	HIS B 777	4.262	15.481	-30.549	1.00	46.20
ATOM	2817	CD2	HIS B 777	2.168	14.882	-30.386	1.00	44.55
ATOM	2818	CE1	HIS B 777	4.048	15.154	-29.287	1.00	44.22
ATOM	2819	NE2	HIS B 777	2.785	14.786	-29.162	1.00	46.79
ATOM	2820	N	PRO B 778	4.204	18.572	-31.649	1.00	48.64
ATOM	2821	CA	PRO B 778	5.382	19.308	-31.183	1.00	48.65
ATOM	2822	C	PRO B 778	6.636	18.467	-30.938	1.00	48.69

ATOM	2823	O	PRO B 778	7.755	18.986	-30.992	1.00	50.23
ATOM	2824	CB	PRO B 778	4.871	20.020	-29.924	1.00	48.43
ATOM	2825	CG	PRO B 778	3.796	19.118	-29.435	1.00	48.56
ATOM	2826	CD	PRO B 778	3.089	18.707	-30.694	1.00	47.48
ATOM	2827	N	HIS B 779	6.479	17.169	-30.708	1.00	47.19
ATOM	2828	CA	HIS B 779	7.666	16.366	-30.468	1.00	46.69
ATOM	2829	C	HIS B 779	8.062	15.405	-31.589	1.00	46.92
ATOM	2830	O	HIS B 779	8.806	14.438	-31.387	1.00	45.42
ATOM	2831	CB	HIS B 779	7.543	15.680	-29.108	1.00	43.27
ATOM	2832	CG	HIS B 779	7.436	16.657	-27.979	1.00	42.66
ATOM	2833	ND1	HIS B 779	8.325	17.699	-27.821	1.00	41.28
ATOM	2834	CD2	HIS B 779	6.504	16.808	-27.010	1.00	42.33
ATOM	2835	CE1	HIS B 779	7.940	18.453	-26.808	1.00	42.15
ATOM	2836	NE2	HIS B 779	6.837	17.935	-26.298	1.00	39.93
ATOM	2837	N	LEU B 780	7.583	15.711	-32.788	1.00	46.23
ATOM	2838	CA	LEU B 780	7.920	14.935	-33.968	1.00	46.87
ATOM	2839	C	LEU B 780	8.316	15.921	-35.056	1.00	47.73
ATOM	2840	O	LEU B 780	7.772	17.024	-35.145	1.00	48.06
ATOM	2841	CB	LEU B 780	6.730	14.107	-34.436	1.00	45.91
ATOM	2842	CG	LEU B 780	6.235	12.985	-33.527	1.00	47.10
ATOM	2843	CD1	LEU B 780	5.096	12.287	-34.244	1.00	48.53
ATOM	2844	CD2	LEU B 780	7.349	11.987	-33.216	1.00	46.79
ATOM	2845	N	VAL B 781	9.277	15.540	-35.878	1.00	48.83
ATOM	2846	CA	VAL B 781	9.691	16.432	-36.944	1.00	51.89
ATOM	2847	C	VAL B 781	8.710	16.336	-38.104	1.00	53.37
ATOM	2848	O	VAL B 781	7.995	15.349	-38.258	1.00	52.89
ATOM	2849	CB	VAL B 781	11.109	16.094	-37.444	1.00	50.59
ATOM	2850	CG1	VAL B 781	12.078	16.089	-36.266	1.00	49.98
ATOM	2851	CG2	VAL B 781	11.107	14.757	-38.152	1.00	48.87
ATOM	2852	N	ARG B 782	8.675	17.382	-38.914	1.00	56.80
ATOM	2853	CA	ARG B 782	7.793	17.423	-40.070	1.00	59.13
ATOM	2854	C	ARG B 782	8.643	17.636	-41.316	1.00	58.23
ATOM	2855	O	ARG B 782	9.646	18.364	-41.293	1.00	57.16
ATOM	2856	CB	ARG B 782	6.784	18.562	-39.923	1.00	61.42
ATOM	2857	CG	ARG B 782	5.654	18.537	-40.920	1.00	66.10
ATOM	2858	CD	ARG B 782	4.579	19.529	-40.496	1.00	72.64
ATOM	2859	NE	ARG B 782	3.401	19.499	-41.364	1.00	77.10
ATOM	2860	CZ	ARG B 782	2.293	20.207	-41.147	1.00	78.91
ATOM	2861	NH1	ARG B 782	2.205	21.003	-40.085	1.00	78.69
ATOM	2862	NH2	ARG B 782	1.273	20.129	-41.997	1.00	80.27
ATOM	2863	N	LEU B 783	8.247	16.980	-42.397	1.00	56.30
ATOM	2864	CA	LEU B 783	8.958	17.102	-43.654	1.00	55.96
ATOM	2865	C	LEU B 783	8.383	18.309	-44.374	1.00	54.57
ATOM	2866	O	LEU B 783	7.175	18.392	-44.573	1.00	56.01
ATOM	2867	CB	LEU B 783	8.745	15.839	-44.486	1.00	57.21

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ATOM	2868	CG	LEU B 783	9.516	15.702	-45.795	1.00	55.26
ATOM	2869	CD1	LEU B 783	11.009	15.669	-45.514	1.00	56.03
ATOM	2870	CD2	LEU B 783	9.080	14.436	-46.485	1.00	55.49
ATOM	2871	N	LEU B 784	9.242	19.250	-44.747	1.00	54.51
ATOM	2872	CA	LEU B 784	8.788	20.450	-45.444	1.00	54.07
ATOM	2873	C	LEU B 784	8.526	20.132	-46.903	1.00	52.39
ATOM	2874	O	LEU B 784	7.471	20.466	-47.443	1.00	52.32
ATOM	2875	CB	LEU B 784	9.832	21.564	-45.340	1.00	54.48
ATOM	2876	CG	LEU B 784	10.072	22.091	-43.920	1.00	57.09
ATOM	2877	CD1	LEU B 784	11.245	23.059	-43.919	1.00	57.21
ATOM	2878	CD2	LEU B 784	8.810	22.765	-43.393	1.00	56.32
ATOM	2879	N	GLY B 785	9.488	19.470	-47.535	1.00	50.88
ATOM	2880	CA	GLY B 785	9.325	19.128	-48.931	1.00	48.30
ATOM	2881	C	GLY B 785	10.255	18.057	-49.460	1.00	48.59
ATOM	2882	O	GLY B 785	11.104	17.513	-48.755	1.00	46.94
ATOM	2883	N	VAL B 786	10.077	17.750	-50.733	1.00	48.89
ATOM	2884	CA	VAL B 786	10.891	16.755	-51.381	1.00	49.74
ATOM	2885	C	VAL B 786	11.370	17.317	-52.707	1.00	51.57
ATOM	2886	O	VAL B 786	10.638	18.059	-53.385	1.00	50.67
ATOM	2887	CB	VAL B 786	10.083	15.468	-51.640	1.00	50.26
ATOM	2888	CG1	VAL B 786	10.931	14.473	-52.414	1.00	50.36
ATOM	2889	CG2	VAL B 786	9.638	14.858	-50.320	1.00	49.86
ATOM	2890	N	CYS B 787	12.609	16.983	-53.058	1.00	50.94
ATOM	2891	CA	CYS B 787	13.187	17.414	-54.316	1.00	51.41
ATOM	2892	C	CYS B 787	13.398	16.134	-55.113	1.00	51.83
ATOM	2893	O	CYS B 787	14.017	15.193	-54.627	1.00	51.13
ATOM	2894	CB	CYS B 787	14.515	18.135	-54.089	1.00	52.49
ATOM	2895	SG	CYS B 787	15.263	18.700	-55.644	1.00	57.81
ATOM	2896	N	LEU B 788	12.891	16.105	-56.339	1.00	54.13
ATOM	2897	CA	LEU B 788	12.975	14.915	-57.173	1.00	57.19
ATOM	2898	C	LEU B 788	14.242	14.704	-57.992	1.00	61.05
ATOM	2899	O	LEU B 788	14.481	13.599	-58.479	1.00	61.41
ATOM	2900	CB	LEU B 788	11.751	14.864	-58.089	1.00	55.35
ATOM	2901	CG	LEU B 788	10.426	14.802	-57.311	1.00	56.39
ATOM	2902	CD1	LEU B 788	9.251	14.950	-58.250	1.00	55.47
ATOM	2903	CD2	LEU B 788	10.334	13.487	-56.548	1.00	55.46
ATOM	2904	N	SER B 789	15.066	15.737	-58.146	1.00	64.33
ATOM	2905	CA	SER B 789	16.285	15.582	-58.938	1.00	66.33
ATOM	2906	C	SER B 789	17.520	16.071	-58.192	1.00	66.73
ATOM	2907	O	SER B 789	17.424	16.955	-57.336	1.00	66.88
ATOM	2908	CB	SER B 789	16.141	16.337	-60.264	1.00	67.97
ATOM	2909	OG	SER B 789	17.099	15.892	-61.214	1.00	72.18
ATOM	2910	N	PRO B 790	18.697	15.474	-58.477	1.00	67.24
ATOM	2911	CA	PRO B 790	18.941	14.388	-59.439	1.00	66.95
ATOM	2912	C	PRO B 790	18.245	13.123	-58.965	1.00	67.17

ATOM	2913	O	PRO B 790	17.782	12.298	-59.757	1.00	66.12
ATOM	2914	CB	PRO B 790	20.454	14.242	-59.407	1.00	66.69
ATOM	2915	CG	PRO B 790	20.768	14.555	-57.969	1.00	66.95
ATOM	2916	CD	PRO B 790	19.933	15.791	-57.739	1.00	66.62
ATOM	2917	N	THR B 791	18.209	12.987	-57.646	1.00	66.82
ATOM	2918	CA	THR B 791	17.565	11.869	-56.986	1.00	66.98
ATOM	2919	C	THR B 791	16.862	12.492	-55.791	1.00	65.80
ATOM	2920	O	THR B 791	17.173	13.617	-55.392	1.00	64.64
ATOM	2921	CB	THR B 791	18.583	10.805	-56.503	1.00	69.05
ATOM	2922	OG1	THR B 791	19.435	11.370	-55.496	1.00	69.07
ATOM	2923	CG2	THR B 791	19.431	10.306	-57.679	1.00	69.29
ATOM	2924	N	ILE B 792	15.920	11.748	-55.229	1.00	64.46
ATOM	2925	CA	ILE B 792	15.117	12.198	-54.103	1.00	62.56
ATOM	2926	C	ILE B 792	15.841	12.710	-52.871	1.00	61.32
ATOM	2927	O	ILE B 792	16.659	12.011	-52.283	1.00	62.26
ATOM	2928	CB	ILE B 792	14.152	11.093	-53.677	1.00	60.97
ATOM	2929	CG1	ILE B 792	13.035	10.988	-54.710	1.00	61.00
ATOM	2930	CG2	ILE B 792	13.616	11.383	-52.311	1.00	58.92
ATOM	2931	CD1	ILE B 792	12.063	9.871	-54.469	1.00	65.86
ATOM	2932	N	GLN B 793	15.510	13.938	-52.483	1.00	60.22
ATOM	2933	CA	GLN B 793	16.103	14.566	-51.310	1.00	60.54
ATOM	2934	C	GLN B 793	14.994	14.972	-50.352	1.00	59.77
ATOM	2935	O	GLN B 793	13.964	15.522	-50.766	1.00	59.02
ATOM	2936	CB	GLN B 793	16.897	15.817	-51.694	1.00	61.88
ATOM	2937	CG	GLN B 793	17.928	15.613	-52.782	1.00	64.34
ATOM	2938	CD	GLN B 793	18.587	16.913	-53.200	1.00	65.85
ATOM	2939	OE1	GLN B 793	19.084	17.033	-54.317	1.00	67.77
ATOM	2940	NE2	GLN B 793	18.601	17.893	-52.299	1.00	66.10
ATOM	2941	N	LEU B 794	15.213	14.697	-49.072	1.00	58.48
ATOM	2942	CA	LEU B 794	14.250	15.036	-48.042	1.00	57.14
ATOM	2943	C	LEU B 794	14.689	16.346	-47.414	1.00	57.64
ATOM	2944	O	LEU B 794	15.859	16.531	-47.093	1.00	57.64
ATOM	2945	CB	LEU B 794	14.187	13.922	-46.992	1.00	55.84
ATOM	2946	CG	LEU B 794	13.804	12.529	-47.515	1.00	54.27
ATOM	2947	CD1	LEU B 794	13.456	11.624	-46.344	1.00	53.66
ATOM	2948	CD2	LEU B 794	12.616	12.627	-48.449	1.00	53.08
ATOM	2949	N	VAL B 795	13.746	17.264	-47.258	1.00	59.07
ATOM	2950	CA	VAL B 795	14.047	18.567	-46.690	1.00	59.85
ATOM	2951	C	VAL B 795	13.222	18.812	-45.435	1.00	62.17
ATOM	2952	O	VAL B 795	11.987	18.855	-45.472	1.00	61.88
ATOM	2953	CB	VAL B 795	13.774	19.697	-47.714	1.00	58.39
ATOM	2954	CG1	VAL B 795	14.231	21.040	-47.157	1.00	58.05
ATOM	2955	CG2	VAL B 795	14.495	19.394	-49.014	1.00	58.45
ATOM	2956	N	THR B 796	13.931	18.969	-44.323	1.00	63.79
ATOM	2957	CA	THR B 796	13.311	19.210	-43.034	1.00	65.36

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ATOM	2958	C	THR B 796	13.869	20.476	-42.436	1.00	66.46
ATOM	2959	O	THR B 796	14.993	20.890	-42.747	1.00	66.26
ATOM	2960	CB	THR B 796	13.606	18.077	-42.033	1.00	65.06
ATOM	2961	OG1	THR B 796	13.043	16.852	-42.509	1.00	68.33
ATOM	2962	CG2	THR B 796	13.007	18.401	-40.672	1.00	66.50
ATOM	2963	N	GLN B 797	13.068	21.090	-41.574	1.00	66.67
ATOM	2964	CA	GLN B 797	13.488	22.284	-40.884	1.00	66.57
ATOM	2965	C	GLN B 797	14.690	21.827	-40.085	1.00	66.07
ATOM	2966	O	GLN B 797	14.680	20.741	-39.501	1.00	65.39
ATOM	2967	CB	GLN B 797	12.393	22.758	-39.935	1.00	67.57
ATOM	2968	CG	GLN B 797	12.673	24.081	-39.263	1.00	70.20
ATOM	2969	CD	GLN B 797	11.514	24.526	-38.399	1.00	73.88
ATOM	2970	OE1	GLN B 797	11.403	24.140	-37.230	1.00	75.03
ATOM	2971	NE2	GLN B 797	10.623	25.327	-38.979	1.00	74.39
ATOM	2972	N	LEU B 798	15.737	22.638	-40.083	1.00	66.31
ATOM	2973	CA	LEU B 798	16.931	22.303	-39.333	1.00	65.46
ATOM	2974	C	LEU B 798	16.672	22.549	-37.851	1.00	66.20
ATOM	2975	O	LEU B 798	15.902	23.441	-37.476	1.00	65.77
ATOM	2976	CB	LEU B 798	18.097	23.170	-39.791	1.00	64.87
ATOM	2977	CG	LEU B 798	19.410	22.965	-39.045	1.00	65.11
ATOM	2978	CD1	LEU B 798	19.933	21.554	-39.290	1.00	64.89
ATOM	2979	CD2	LEU B 798	20.411	23.999	-39.516	1.00	64.74
ATOM	2980	N	MET B 799	17.296	21.733	-37.011	1.00	66.39
ATOM	2981	CA	MET B 799	17.169	21.885	-35.571	1.00	65.45
ATOM	2982	C	MET B 799	18.506	22.465	-35.113	1.00	65.57
ATOM	2983	O	MET B 799	19.547	21.798	-35.162	1.00	64.60
ATOM	2984	CB	MET B 799	16.881	20.536	-34.911	1.00	64.87
ATOM	2985	CG	MET B 799	15.491	19.990	-35.216	1.00	64.16
ATOM	2986	SD	MET B 799	14.163	21.040	-34.582	1.00	65.40
ATOM	2987	CE	MET B 799	13.635	21.891	-36.058	1.00	64.20
ATOM	2988	N	PRO B 800	18.486	23.730	-34.669	1.00	65.90
ATOM	2989	CA	PRO B 800	19.652	24.484	-34.196	1.00	65.62
ATOM	2990	C	PRO B 800	20.591	23.765	-33.239	1.00	65.08
ATOM	2991	O	PRO B 800	21.805	23.817	-33.412	1.00	64.72
ATOM	2992	CB	PRO B 800	19.025	25.731	-33.566	1.00	66.58
ATOM	2993	CG	PRO B 800	17.699	25.239	-33.092	1.00	66.63
ATOM	2994	CD	PRO B 800	17.241	24.410	-34.269	1.00	66.65
ATOM	2995	N	HIS B 801	20.044	23.088	-32.237	1.00	63.99
ATOM	2996	CA	HIS B 801	20.892	22.408	-31.277	1.00	62.97
ATOM	2997	C	HIS B 801	21.310	20.988	-31.636	1.00	61.86
ATOM	2998	O	HIS B 801	21.843	20.257	-30.804	1.00	63.07
ATOM	2999	CB	HIS B 801	20.238	22.471	-29.900	1.00	64.77
ATOM	3000	CG	HIS B 801	20.298	23.836	-29.283	1.00	66.40
ATOM	3001	ND1	HIS B 801	21.486	24.432	-28.909	1.00	65.11
ATOM	3002	CD2	HIS B 801	19.324	24.740	-29.016	1.00	66.09

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ATOM	3003	CE1 HIS B 801	21.240	25.641	-28.439	1.00	64.78
ATOM	3004	NE2 HIS B 801	19.936	25.853	-28.492	1.00	65.44
ATOM	3005	N GLY B 802	21.090	20.607	-32.886	1.00	60.15
ATOM	3006	CA GLY B 802	21.490	19.289	-33.331	1.00	57.51
ATOM	3007	C GLY B 802	20.901	18.064	-32.650	1.00	56.35
ATOM	3008	O GLY B 802	19.810	18.086	-32.075	1.00	53.17
ATOM	3009	N CYS B 803	21.660	16.978	-32.735	1.00	56.15
ATOM	3010	CA CYS B 803	21.277	15.688	-32.190	1.00	55.11
ATOM	3011	C CYS B 803	21.445	15.568	-30.682	1.00	55.33
ATOM	3012	O CYS B 803	22.491	15.911	-30.128	1.00	54.75
ATOM	3013	CB CYS B 803	22.074	14.594	-32.899	1.00	55.30
ATOM	3014	SG CYS B 803	21.743	14.518	-34.697	1.00	60.15
ATOM	3015	N LEU B 804	20.396	15.066	-30.031	1.00	54.33
ATOM	3016	CA LEU B 804	20.376	14.883	-28.588	1.00	53.12
ATOM	3017	C LEU B 804	21.534	14.014	-28.089	1.00	52.92
ATOM	3018	O LEU B 804	22.177	14.328	-27.088	1.00	51.69
ATOM	3019	CB LEU B 804	19.043	14.266	-28.168	1.00	52.44
ATOM	3020	CG LEU B 804	18.815	14.078	-26.666	1.00	50.62
ATOM	3021	CD1 LEU B 804	18.967	15.417	-25.974	1.00	51.38
ATOM	3022	CD2 LEU B 804	17.428	13.491	-26.413	1.00	49.29
ATOM	3023	N LEU B 805	21.801	12.920	-28.782	1.00	52.39
ATOM	3024	CA LEU B 805	22.888	12.053	-28.373	1.00	54.68
ATOM	3025	C LEU B 805	24.161	12.863	-28.138	1.00	57.25
ATOM	3026	O LEU B 805	24.918	12.604	-27.200	1.00	56.94
ATOM	3027	CB LEU B 805	23.156	10.998	-29.438	1.00	52.27
ATOM	3028	CG LEU B 805	24.380	10.169	-29.080	1.00	51.83
ATOM	3029	CD1 LEU B 805	24.151	9.471	-27.737	1.00	50.62
ATOM	3030	CD2 LEU B 805	24.660	9.179	-30.182	1.00	53.24
ATOM	3031	N GLU B 806	24.387	13.844	-29.006	1.00	60.22
ATOM	3032	CA GLU B 806	25.558	14.705	-28.919	1.00	62.56
ATOM	3033	C GLU B 806	25.351	15.761	-27.836	1.00	60.94
ATOM	3034	O GLU B 806	26.233	16.013	-27.018	1.00	60.73
ATOM	3035	CB GLU B 806	25.804	15.395	-30.267	1.00	67.71
ATOM	3036	CG GLU B 806	25.695	14.471	-31.488	1.00	75.24
ATOM	3037	CD GLU B 806	25.922	15.212	-32.804	1.00	79.21
ATOM	3038	OE1 GLU B 806	25.254	16.251	-33.026	1.00	81.47
ATOM	3039	OE2 GLU B 806	26.762	14.758	-33.615	1.00	79.92
ATOM	3040	N TYR B 807	24.173	16.371	-27.832	1.00	59.29
ATOM	3041	CA TYR B 807	23.856	17.400	-26.860	1.00	59.19
ATOM	3042	C TYR B 807	24.157	16.981	-25.424	1.00	59.38
ATOM	3043	O TYR B 807	24.822	17.708	-24.700	1.00	58.77
ATOM	3044	CB TYR B 807	22.391	17.784	-26.966	1.00	59.99
ATOM	3045	CG TYR B 807	22.053	19.071	-26.262	1.00	60.81
ATOM	3046	CD1 TYR B 807	22.227	20.300	-26.897	1.00	61.13
ATOM	3047	CD2 TYR B 807	21.546	19.064	-24.966	1.00	61.33

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ATOM	3048	CE1 TYR B 807	21.899	21.489	-26.265	1.00	61.63
ATOM	3049	CE2 TYR B 807	21.215	20.252	-24.319	1.00	62.89
ATOM	3050	CZ TYR B 807	21.392	21.460	-24.977	1.00	62.83
ATOM	3051	OH TYR B 807	21.035	22.630	-24.354	1.00	64.52
ATOM	3052	N VAL B 808	23.671	15.819	-25.002	1.00	60.10
ATOM	3053	CA VAL B 808	23.927	15.382	-23.630	1.00	62.18
ATOM	3054	C VAL B 808	25.398	15.164	-23.325	1.00	63.86
ATOM	3055	O VAL B 808	25.855	15.480	-22.235	1.00	64.12
ATOM	3056	CB VAL B 808	23.176	14.073	-23.257	1.00	60.51
ATOM	3057	CG1 VAL B 808	21.704	14.344	-23.088	1.00	59.12
ATOM	3058	CG2 VAL B 808	23.417	13.015	-24.310	1.00	60.89
ATOM	3059	N HIS B 809	26.147	14.624	-24.273	1.00	67.06
ATOM	3060	CA HIS B 809	27.555	14.383	-24.014	1.00	70.40
ATOM	3061	C HIS B 809	28.269	15.679	-23.658	1.00	70.99
ATOM	3062	O HIS B 809	28.886	15.797	-22.602	1.00	72.12
ATOM	3063	CB HIS B 809	28.236	13.746	-25.226	1.00	73.29
ATOM	3064	CG HIS B 809	29.639	13.294	-24.956	1.00	76.84
ATOM	3065	ND1 HIS B 809	29.937	12.293	-24.056	1.00	77.14
ATOM	3066	CD2 HIS B 809	30.826	13.724	-25.447	1.00	77.99
ATOM	3067	CE1 HIS B 809	31.247	12.126	-24.005	1.00	78.08
ATOM	3068	NE2 HIS B 809	31.809	12.982	-24.839	1.00	78.17
ATOM	3069	N GLU B 810	28.162	16.660	-24.537	1.00	71.44
ATOM	3070	CA GLU B 810	28.827	17.928	-24.322	1.00	72.20
ATOM	3071	C GLU B 810	28.320	18.741	-23.141	1.00	72.35
ATOM	3072	O GLU B 810	29.121	19.284	-22.378	1.00	72.42
ATOM	3073	CB GLU B 810	28.760	18.741	-25.604	1.00	74.24
ATOM	3074	CG GLU B 810	29.503	18.067	-26.746	1.00	76.99
ATOM	3075	CD GLU B 810	29.191	18.694	-28.082	1.00	80.01
ATOM	3076	OE1 GLU B 810	29.408	19.918	-28.231	1.00	81.26
ATOM	3077	OE2 GLU B 810	28.726	17.961	-28.982	1.00	80.87
ATOM	3078	N HIS B 811	27.001	18.822	-22.976	1.00	72.11
ATOM	3079	CA HIS B 811	26.427	19.588	-21.869	1.00	71.84
ATOM	3080	C HIS B 811	26.168	18.752	-20.624	1.00	71.80
ATOM	3081	O HIS B 811	25.302	19.096	-19.820	1.00	70.61
ATOM	3082	CB HIS B 811	25.115	20.252	-22.286	1.00	71.49
ATOM	3083	CG HIS B 811	25.243	21.157	-23.468	1.00	71.98
ATOM	3084	ND1 HIS B 811	25.549	20.695	-24.729	1.00	73.94
ATOM	3085	CD2 HIS B 811	25.085	22.496	-23.586	1.00	72.36
ATOM	3086	CE1 HIS B 811	25.571	21.709	-25.575	1.00	74.46
ATOM	3087	NE2 HIS B 811	25.293	22.813	-24.907	1.00	74.62
ATOM	3088	N LYS B 812	26.917	17.665	-20.460	1.00	73.21
ATOM	3089	CA LYS B 812	26.736	16.793	-19.300	1.00	75.11
ATOM	3090	C LYS B 812	26.604	17.575	-18.001	1.00	75.97
ATOM	3091	O LYS B 812	25.592	17.499	-17.305	1.00	75.98
ATOM	3092	CB LYS B 812	27.901	15.805	-19.157	1.00	74.11

ATOM	3093	CG	LYS B 812	27.887	15.118	-17.799	1.00	74.38
ATOM	3094	CD	LYS B 812	28.809	13.917	-17.690	1.00	73.97
ATOM	3095	CE	LYS B 812	28.613	13.265	-16.322	1.00	72.70
ATOM	3096	NZ	LYS B 812	29.394	12.015	-16.154	1.00	73.35
ATOM	3097	N	ASP B 813	27.642	18.330	-17.682	1.00	77.79
ATOM	3098	CA	ASP B 813	27.668	19.119	-16.463	1.00	79.44
ATOM	3099	C	ASP B 813	26.644	20.256	-16.500	1.00	79.12
ATOM	3100	O	ASP B 813	26.706	21.185	-15.699	1.00	79.20
ATOM	3101	CB	ASP B 813	29.085	19.659	-16.258	1.00	81.16
ATOM	3102	CG	ASP B 813	30.154	18.594	-16.504	1.00	83.14
ATOM	3103	OD1	ASP B 813	30.044	17.498	-15.912	1.00	82.59
ATOM	3104	OD2	ASP B 813	31.101	18.845	-17.288	1.00	84.71
ATOM	3105	N	ASN B 814	25.688	20.159	-17.421	1.00	78.87
ATOM	3106	CA	ASN B 814	24.653	21.178	-17.570	1.00	77.92
ATOM	3107	C	ASN B 814	23.247	20.591	-17.474	1.00	75.00
ATOM	3108	O	ASN B 814	22.278	21.320	-17.278	1.00	73.54
ATOM	3109	CB	ASN B 814	24.807	21.875	-18.925	1.00	83.27
ATOM	3110	CG	ASN B 814	23.809	23.011	-19.123	1.00	87.37
ATOM	3111	OD1	ASN B 814	23.599	23.487	-20.248	1.00	89.03
ATOM	3112	ND2	ASN B 814	23.200	23.462	-18.027	1.00	88.12
ATOM	3113	N	ILE B 815	23.136	19.274	-17.610	1.00	72.06
ATOM	3114	CA	ILE B 815	21.834	18.608	-17.567	1.00	68.21
ATOM	3115	C	ILE B 815	21.335	18.306	-16.157	1.00	65.98
ATOM	3116	O	ILE B 815	22.010	17.630	-15.374	1.00	66.13
ATOM	3117	CB	ILE B 815	21.864	17.285	-18.361	1.00	67.26
ATOM	3118	CG1	ILE B 815	22.485	17.517	-19.738	1.00	66.10
ATOM	3119	CG2	ILE B 815	20.461	16.739	-18.512	1.00	66.10
ATOM	3120	CD1	ILE B 815	21.770	18.532	-20.565	1.00	65.00
ATOM	3121	N	GLY B 816	20.139	18.806	-15.853	1.00	63.12
ATOM	3122	CA	GLY B 816	19.534	18.592	-14.549	1.00	59.27
ATOM	3123	C	GLY B 816	18.502	17.479	-14.584	1.00	57.42
ATOM	3124	O	GLY B 816	18.077	17.046	-15.658	1.00	56.24
ATOM	3125	N	SER B 817	18.081	17.013	-13.413	1.00	53.84
ATOM	3126	CA	SER B 817	17.118	15.936	-13.375	1.00	51.45
ATOM	3127	C	SER B 817	15.826	16.343	-14.067	1.00	50.87
ATOM	3128	O	SER B 817	15.205	15.532	-14.746	1.00	51.59
ATOM	3129	CB	SER B 817	16.841	15.493	-11.927	1.00	50.35
ATOM	3130	OG	SER B 817	16.050	16.422	-11.214	1.00	48.83
ATOM	3131	N	GLN B 818	15.426	17.597	-13.914	1.00	48.39
ATOM	3132	CA	GLN B 818	14.189	18.046	-14.531	1.00	50.14
ATOM	3133	C	GLN B 818	14.256	17.872	-16.048	1.00	50.37
ATOM	3134	O	GLN B 818	13.397	17.234	-16.664	1.00	50.57
ATOM	3135	CB	GLN B 818	13.931	19.509	-14.172	1.00	51.39
ATOM	3136	CG	GLN B 818	12.530	20.005	-14.512	1.00	53.65
ATOM	3137	CD	GLN B 818	12.304	21.465	-14.104	1.00	54.44

ATOM	3138	OE1 GLN B 818	13.090	22.354	-14.451	1.00	51.78
ATOM	3139	NE2 GLN B 818	11.223	21.711	-13.374	1.00	53.12
ATOM	3140	N LEU B 819	15.299	18.439	-16.636	1.00	49.58
ATOM	3141	CA LEU B 819	15.542	18.376	-18.071	1.00	48.96
ATOM	3142	C LEU B 819	15.433	16.942	-18.617	1.00	48.91
ATOM	3143	O LEU B 819	14.665	16.680	-19.537	1.00	47.63
ATOM	3144	CB LEU B 819	16.937	18.931	-18.342	1.00	49.33
ATOM	3145	CG LEU B 819	17.233	19.667	-19.638	1.00	50.99
ATOM	3146	CD1 LEU B 819	16.180	20.729	-19.883	1.00	51.26
ATOM	3147	CD2 LEU B 819	18.620	20.284	-19.528	1.00	48.42
ATOM	3148	N LEU B 820	16.207	16.027	-18.036	1.00	48.12
ATOM	3149	CA LEU B 820	16.232	14.627	-18.448	1.00	47.03
ATOM	3150	C LEU B 820	14.908	13.879	-18.355	1.00	47.74
ATOM	3151	O LEU B 820	14.621	13.036	-19.210	1.00	46.11
ATOM	3152	CB LEU B 820	17.284	13.865	-17.648	1.00	46.94
ATOM	3153	CG LEU B 820	18.733	14.082	-18.069	1.00	46.17
ATOM	3154	CD1 LEU B 820	19.655	13.512	-17.010	1.00	48.56
ATOM	3155	CD2 LEU B 820	18.982	13.429	-19.417	1.00	47.04
ATOM	3156	N LEU B 821	14.119	14.159	-17.315	1.00	47.54
ATOM	3157	CA LEU B 821	12.818	13.508	-17.140	1.00	47.15
ATOM	3158	C LEU B 821	11.781	14.084	-18.094	1.00	47.22
ATOM	3159	O LEU B 821	10.822	13.407	-18.463	1.00	48.21
ATOM	3160	CB LEU B 821	12.311	13.667	-15.712	1.00	46.22
ATOM	3161	CG LEU B 821	12.974	12.829	-14.621	1.00	48.11
ATOM	3162	CD1 LEU B 821	12.444	13.272	-13.264	1.00	46.19
ATOM	3163	CD2 LEU B 821	12.685	11.353	-14.844	1.00	46.08
ATOM	3164	N ASN B 822	11.970	15.336	-18.489	1.00	47.10
ATOM	3165	CA ASN B 822	11.048	15.981	-19.415	1.00	48.36
ATOM	3166	C ASN B 822	11.311	15.539	-20.860	1.00	46.42
ATOM	3167	O ASN B 822	10.398	15.478	-21.678	1.00	46.12
ATOM	3168	CB ASN B 822	11.153	17.499	-19.263	1.00	52.20
ATOM	3169	CG ASN B 822	10.430	18.003	-18.020	1.00	56.94
ATOM	3170	OD1 ASN B 822	9.200	18.106	-18.005	1.00	60.36
ATOM	3171	ND2 ASN B 822	11.184	18.295	-16.966	1.00	58.16
ATOM	3172	N TRP B 823	12.560	15.220	-21.174	1.00	45.04
ATOM	3173	CA TRP B 823	12.878	14.746	-22.512	1.00	43.92
ATOM	3174	C TRP B 823	12.219	13.378	-22.647	1.00	43.43
ATOM	3175	O TRP B 823	11.667	13.026	-23.698	1.00	42.53
ATOM	3176	CB TRP B 823	14.390	14.597	-22.700	1.00	42.86
ATOM	3177	CG TRP B 823	15.149	15.901	-22.828	1.00	44.63
ATOM	3178	CD1 TRP B 823	14.654	17.109	-23.246	1.00	43.05
ATOM	3179	CD2 TRP B 823	16.553	16.098	-22.612	1.00	44.09
ATOM	3180	NE1 TRP B 823	15.664	18.036	-23.308	1.00	43.18
ATOM	3181	CE2 TRP B 823	16.840	17.445	-22.923	1.00	44.18
ATOM	3182	CE3 TRP B 823	17.599	15.264	-22.184	1.00	44.59

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ATOM	3183	CZ2 TRP B 823	18.133	17.985	-22.818	1.00	44.47
ATOM	3184	CZ3 TRP B 823	18.886	15.803	-22.080	1.00	46.01
ATOM	3185	CH2 TRP B 823	19.139	17.154	-22.397	1.00	42.03
ATOM	3186	N CYS B 824	12.274	12.617	-21.560	1.00	41.79
ATOM	3187	CA CYS B 824	11.699	11.290	-21.535	1.00	42.66
ATOM	3188	C CYS B 824	10.243	11.359	-21.920	1.00	44.42
ATOM	3189	O CYS B 824	9.785	10.604	-22.778	1.00	45.73
ATOM	3190	CB CYS B 824	11.846	10.663	-20.144	1.00	43.86
ATOM	3191	SG CYS B 824	13.522	10.059	-19.758	1.00	43.47
ATOM	3192	N VAL B 825	9.521	12.278	-21.287	1.00	45.21
ATOM	3193	CA VAL B 825	8.100	12.455	-21.549	1.00	42.85
ATOM	3194	C VAL B 825	7.858	12.902	-22.979	1.00	42.45
ATOM	3195	O VAL B 825	6.970	12.394	-23.665	1.00	40.16
ATOM	3196	CB VAL B 825	7.486	13.495	-20.585	1.00	42.45
ATOM	3197	CG1 VAL B 825	6.062	13.834	-21.014	1.00	41.54
ATOM	3198	CG2 VAL B 825	7.488	12.948	-19.173	1.00	40.00
ATOM	3199	N GLN B 826	8.650	13.868	-23.423	1.00	43.25
ATOM	3200	CA GLN B 826	8.510	14.379	-24.776	1.00	43.45
ATOM	3201	C GLN B 826	8.769	13.251	-25.762	1.00	41.87
ATOM	3202	O GLN B 826	7.985	13.044	-26.685	1.00	42.00
ATOM	3203	CB GLN B 826	9.468	15.555	-25.000	1.00	42.33
ATOM	3204	CG GLN B 826	9.022	16.786	-24.250	1.00	44.18
ATOM	3205	CD GLN B 826	9.988	17.944	-24.348	1.00	44.47
ATOM	3206	OE1 GLN B 826	10.716	18.084	-25.321	1.00	43.53
ATOM	3207	NE2 GLN B 826	9.981	18.799	-23.335	1.00	47.99
ATOM	3208	N ILE B 827	9.845	12.498	-25.565	1.00	39.85
ATOM	3209	CA ILE B 827	10.093	11.406	-26.487	1.00	40.62
ATOM	3210	C ILE B 827	8.928	10.412	-26.458	1.00	41.30
ATOM	3211	O ILE B 827	8.459	9.988	-27.513	1.00	43.72
ATOM	3212	CB ILE B 827	11.402	10.662	-26.178	1.00	39.44
ATOM	3213	CG1 ILE B 827	12.578	11.636	-26.275	1.00	38.32
ATOM	3214	CG2 ILE B 827	11.583	9.500	-27.171	1.00	37.20
ATOM	3215	CD1 ILE B 827	13.934	11.012	-26.017	1.00	37.82
ATOM	3216	N ALA B 828	8.448	10.059	-25.266	1.00	38.63
ATOM	3217	CA ALA B 828	7.347	9.113	-25.146	1.00	40.14
ATOM	3218	C ALA B 828	6.043	9.649	-25.728	1.00	42.58
ATOM	3219	O ALA B 828	5.185	8.881	-26.177	1.00	43.82
ATOM	3220	CB ALA B 828	7.140	8.723	-23.692	1.00	40.67
ATOM	3221	N LYS B 829	5.873	10.963	-25.722	1.00	44.00
ATOM	3222	CA LYS B 829	4.647	11.525	-26.273	1.00	43.33
ATOM	3223	C LYS B 829	4.656	11.428	-27.795	1.00	43.62
ATOM	3224	O LYS B 829	3.640	11.094	-28.401	1.00	44.41
ATOM	3225	CB LYS B 829	4.461	12.971	-25.809	1.00	43.70
ATOM	3226	CG LYS B 829	3.810	13.088	-24.433	1.00	41.95
ATOM	3227	CD LYS B 829	3.641	14.542	-24.038	1.00	44.96

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ATOM	3228	CE	LYS B 829	2.871	14.679	-22.747	1.00	47.02
ATOM	3229	NZ	LYS B 829	2.772	16.101	-22.347	1.00	49.90
ATOM	3230	N	GLY B 830	5.803	11.704	-28.410	1.00	42.29
ATOM	3231	CA	GLY B 830	5.897	11.603	-29.854	1.00	42.16
ATOM	3232	C	GLY B 830	5.631	10.178	-30.327	1.00	42.55
ATOM	3233	O	GLY B 830	4.952	9.958	-31.336	1.00	43.40
ATOM	3234	N	MET B 831	6.178	9.202	-29.611	1.00	41.44
ATOM	3235	CA	MET B 831	5.955	7.811	-29.972	1.00	43.60
ATOM	3236	C	MET B 831	4.450	7.563	-29.842	1.00	43.46
ATOM	3237	O	MET B 831	3.840	6.886	-30.670	1.00	42.80
ATOM	3238	CB	MET B 831	6.748	6.867	-29.042	1.00	43.14
ATOM	3239	CG	MET B 831	8.267	6.966	-29.199	1.00	42.68
ATOM	3240	SD	MET B 831	8.809	6.840	-30.938	1.00	43.27
ATOM	3241	CE	MET B 831	8.511	5.103	-31.247	1.00	44.19
ATOM	3242	N	MET B 832	3.860	8.142	-28.802	1.00	42.18
ATOM	3243	CA	MET B 832	2.433	8.006	-28.549	1.00	43.21
ATOM	3244	C	MET B 832	1.641	8.454	-29.780	1.00	42.04
ATOM	3245	O	MET B 832	0.683	7.793	-30.201	1.00	40.20
ATOM	3246	CB	MET B 832	2.062	8.866	-27.347	1.00	46.91
ATOM	3247	CG	MET B 832	0.984	8.297	-26.452	1.00	50.62
ATOM	3248	SD	MET B 832	0.679	9.445	-25.093	1.00	58.47
ATOM	3249	CE	MET B 832	1.936	8.941	-24.018	1.00	53.62
ATOM	3250	N	TYR B 833	2.066	9.581	-30.349	1.00	40.89
ATOM	3251	CA	TYR B 833	1.439	10.157	-31.523	1.00	39.85
ATOM	3252	C	TYR B 833	1.616	9.253	-32.734	1.00	41.61
ATOM	3253	O	TYR B 833	0.714	9.143	-33.572	1.00	39.17
ATOM	3254	CB	TYR B 833	2.048	11.521	-31.824	1.00	39.98
ATOM	3255	CG	TYR B 833	1.369	12.250	-32.970	1.00	42.77
ATOM	3256	CD1	TYR B 833	0.311	13.147	-32.737	1.00	41.95
ATOM	3257	CD2	TYR B 833	1.787	12.053	-34.290	1.00	38.99
ATOM	3258	CE1	TYR B 833	-0.301	13.832	-33.798	1.00	38.79
ATOM	3259	CE2	TYR B 833	1.184	12.724	-35.345	1.00	38.68
ATOM	3260	CZ	TYR B 833	0.145	13.612	-35.097	1.00	40.21
ATOM	3261	OH	TYR B 833	-0.433	14.279	-36.159	1.00	40.82
ATOM	3262	N	LEU B 834	2.784	8.619	-32.829	1.00	42.19
ATOM	3263	CA	LEU B 834	3.080	7.721	-33.944	1.00	43.73
ATOM	3264	C	LEU B 834	2.265	6.423	-33.844	1.00	44.01
ATOM	3265	O	LEU B 834	1.736	5.937	-34.845	1.00	42.17
ATOM	3266	CB	LEU B 834	4.584	7.384	-33.989	1.00	45.03
ATOM	3267	CG	LEU B 834	5.669	8.440	-34.301	1.00	47.70
ATOM	3268	CD1	LEU B 834	7.028	7.851	-33.978	1.00	46.80
ATOM	3269	CD2	LEU B 834	5.649	8.858	-35.759	1.00	44.71
ATOM	3270	N	GLU B 835	2.166	5.866	-32.640	1.00	44.61
ATOM	3271	CA	GLU B 835	1.428	4.624	-32.444	1.00	48.10
ATOM	3272	C	GLU B 835	-0.053	4.827	-32.708	1.00	50.02

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ATOM	3273	O	GLU B 835	-0.735	3.937	-33.215	1.00	48.65
ATOM	3274	CB	GLU B 835	1.622	4.089	-31.027	1.00	48.14
ATOM	3275	CG	GLU B 835	0.745	2.893	-30.733	1.00	51.80
ATOM	3276	CD	GLU B 835	0.921	2.380	-29.327	1.00	55.96
ATOM	3277	OE1	GLU B 835	1.020	3.212	-28.401	1.00	58.77
ATOM	3278	OE2	GLU B 835	0.949	1.147	-29.139	1.00	59.79
ATOM	3279	N	GLU B 836	-0.537	6.008	-32.347	1.00	51.95
ATOM	3280	CA	GLU B 836	-1.926	6.378	-32.545	1.00	53.09
ATOM	3281	C	GLU B 836	-2.227	6.270	-34.048	1.00	52.44
ATOM	3282	O	GLU B 836	-3.325	5.874	-34.442	1.00	52.73
ATOM	3283	CB	GLU B 836	-2.121	7.807	-32.029	1.00	55.57
ATOM	3284	CG	GLU B 836	-3.548	8.296	-31.901	1.00	62.73
ATOM	3285	CD	GLU B 836	-3.630	9.684	-31.243	1.00	69.86
ATOM	3286	OE1	GLU B 836	-4.721	10.308	-31.286	1.00	71.77
ATOM	3287	OE2	GLU B 836	-2.606	10.150	-30.677	1.00	71.84
ATOM	3288	N	ARG B 837	-1.233	6.597	-34.875	1.00	50.86
ATOM	3289	CA	ARG B 837	-1.361	6.550	-36.339	1.00	51.45
ATOM	3290	C	ARG B 837	-0.926	5.206	-36.939	1.00	50.30
ATOM	3291	O	ARG B 837	-0.750	5.098	-38.148	1.00	47.12
ATOM	3292	CB	ARG B 837	-0.501	7.650	-36.987	1.00	53.02
ATOM	3293	CG	ARG B 837	-0.781	9.066	-36.521	1.00	55.22
ATOM	3294	CD	ARG B 837	-2.239	9.377	-36.704	1.00	58.03
ATOM	3295	NE	ARG B 837	-2.603	10.765	-36.431	1.00	59.91
ATOM	3296	CZ	ARG B 837	-2.371	11.412	-35.294	1.00	58.31
ATOM	3297	NH1	ARG B 837	-1.745	10.822	-34.282	1.00	57.92
ATOM	3298	NH2	ARG B 837	-2.830	12.645	-35.152	1.00	57.89
ATOM	3299	N	ARG B 838	-0.754	4.198	-36.086	1.00	51.66
ATOM	3300	CA	ARG B 838	-0.295	2.864	-36.489	1.00	51.85
ATOM	3301	C	ARG B 838	1.055	2.920	-37.202	1.00	49.65
ATOM	3302	O	ARG B 838	1.290	2.213	-38.186	1.00	50.29
ATOM	3303	CB	ARG B 838	-1.334	2.143	-37.369	1.00	53.63
ATOM	3304	CG	ARG B 838	-2.470	1.492	-36.575	1.00	59.68
ATOM	3305	CD	ARG B 838	-1.932	0.532	-35.496	1.00	64.00
ATOM	3306	NE	ARG B 838	-1.885	-0.866	-35.933	1.00	69.82
ATOM	3307	CZ	ARG B 838	-2.913	-1.717	-35.876	1.00	71.87
ATOM	3308	NH1	ARG B 838	-2.764	-2.966	-36.307	1.00	71.46
ATOM	3309	NH2	ARG B 838	-4.084	-1.332	-35.374	1.00	72.32
ATOM	3310	N	LEU B 839	1.945	3.759	-36.692	1.00	45.08
ATOM	3311	CA	LEU B 839	3.263	3.886	-37.282	1.00	44.44
ATOM	3312	C	LEU B 839	4.350	3.426	-36.319	1.00	44.15
ATOM	3313	O	LEU B 839	4.454	3.900	-35.183	1.00	43.92
ATOM	3314	CB	LEU B 839	3.512	5.331	-37.699	1.00	45.11
ATOM	3315	CG	LEU B 839	2.429	5.939	-38.601	1.00	47.37
ATOM	3316	CD1	LEU B 839	2.763	7.407	-38.852	1.00	45.99
ATOM	3317	CD2	LEU B 839	2.317	5.161	-39.921	1.00	43.39

ATOM	3318	N	VAL B 840	5.152	2.481	-36.785	1.00	43.12
ATOM	3319	CA	VAL B 840	6.246	1.936	-36.000	1.00	42.97
ATOM	3320	C	VAL B 840	7.543	2.589	-36.490	1.00	43.65
ATOM	3321	O	VAL B 840	7.796	2.628	-37.690	1.00	44.79
ATOM	3322	CB	VAL B 840	6.305	0.408	-36.192	1.00	42.39
ATOM	3323	CG1	VAL B 840	7.382	-0.221	-35.307	1.00	42.09
ATOM	3324	CG2	VAL B 840	4.945	-0.177	-35.881	1.00	41.99
ATOM	3325	N	HIS B 841	8.351	3.110	-35.570	1.00	43.05
ATOM	3326	CA	HIS B 841	9.613	3.756	-35.932	1.00	43.35
ATOM	3327	C	HIS B 841	10.680	2.760	-36.412	1.00	44.72
ATOM	3328	O	HIS B 841	11.258	2.927	-37.485	1.00	45.10
ATOM	3329	CB	HIS B 841	10.150	4.547	-34.736	1.00	41.90
ATOM	3330	CG	HIS B 841	11.221	5.535	-35.090	1.00	40.88
ATOM	3331	ND1	HIS B 841	12.406	5.170	-35.690	1.00	39.11
ATOM	3332	CD2	HIS B 841	11.289	6.876	-34.917	1.00	41.53
ATOM	3333	CE1	HIS B 841	13.156	6.242	-35.870	1.00	40.04
ATOM	3334	NE2	HIS B 841	12.502	7.291	-35.409	1.00	39.97
ATOM	3335	N	ARG B 842	10.937	1.731	-35.607	1.00	46.60
ATOM	3336	CA	ARG B 842	11.927	0.691	-35.915	1.00	47.69
ATOM	3337	C	ARG B 842	13.380	1.106	-35.704	1.00	47.11
ATOM	3338	O	ARG B 842	14.260	0.250	-35.650	1.00	47.21
ATOM	3339	CB	ARG B 842	11.794	0.199	-37.356	1.00	48.94
ATOM	3340	CG	ARG B 842	10.483	-0.442	-37.701	1.00	53.39
ATOM	3341	CD	ARG B 842	10.558	-1.004	-39.106	1.00	56.65
ATOM	3342	NE	ARG B 842	9.354	-1.720	-39.505	1.00	57.96
ATOM	3343	CZ	ARG B 842	9.326	-2.590	-40.504	1.00	59.81
ATOM	3344	NH1	ARG B 842	10.435	-2.834	-41.183	1.00	61.66
ATOM	3345	NH2	ARG B 842	8.203	-3.216	-40.821	1.00	61.73
ATOM	3346	N	ASP B 843	13.639	2.403	-35.587	1.00	45.43
ATOM	3347	CA	ASP B 843	15.009	2.862	-35.402	1.00	44.93
ATOM	3348	C	ASP B 843	15.108	4.035	-34.427	1.00	43.50
ATOM	3349	O	ASP B 843	15.803	5.029	-34.679	1.00	40.29
ATOM	3350	CB	ASP B 843	15.602	3.234	-36.769	1.00	48.21
ATOM	3351	CG	ASP B 843	17.058	3.636	-36.687	1.00	49.17
ATOM	3352	OD1	ASP B 843	17.829	2.925	-36.005	1.00	50.67
ATOM	3353	OD2	ASP B 843	17.424	4.656	-37.309	1.00	50.03
ATOM	3354	N	LEU B 844	14.397	3.914	-33.312	1.00	41.09
ATOM	3355	CA	LEU B 844	14.409	4.942	-32.296	1.00	39.45
ATOM	3356	C	LEU B 844	15.683	4.757	-31.476	1.00	41.41
ATOM	3357	O	LEU B 844	15.962	3.662	-30.982	1.00	39.94
ATOM	3358	CB	LEU B 844	13.192	4.802	-31.394	1.00	37.57
ATOM	3359	CG	LEU B 844	13.136	5.718	-30.161	1.00	37.58
ATOM	3360	CD1	LEU B 844	12.897	7.175	-30.572	1.00	31.85
ATOM	3361	CD2	LEU B 844	12.023	5.232	-29.248	1.00	33.61
ATOM	3362	N	ALA B 845	16.461	5.825	-31.356	1.00	41.14

ATOM	3363	CA	ALA B 845	17.703	5.793	-30.594	1.00	43.80
ATOM	3364	C	ALA B 845	17.998	7.233	-30.239	1.00	44.77
ATOM	3365	O	ALA B 845	17.463	8.139	-30.872	1.00	46.46
ATOM	3366	CB	ALA B 845	18.839	5.208	-31.436	1.00	43.20
ATOM	3367	N	ALA B 846	18.838	7.462	-29.241	1.00	44.58
ATOM	3368	CA	ALA B 846	19.124	8.833	-28.856	1.00	45.24
ATOM	3369	C	ALA B 846	19.609	9.661	-30.030	1.00	45.63
ATOM	3370	O	ALA B 846	19.289	10.850	-30.115	1.00	47.93
ATOM	3371	CB	ALA B 846	20.142	8.870	-27.734	1.00	45.17
ATOM	3372	N	ARG B 847	20.363	9.045	-30.941	1.00	44.22
ATOM	3373	CA	ARG B 847	20.886	9.786	-32.094	1.00	46.27
ATOM	3374	C	ARG B 847	19.800	10.270	-33.054	1.00	46.18
ATOM	3375	O	ARG B 847	20.043	11.161	-33.865	1.00	46.55
ATOM	3376	CB	ARG B 847	21.895	8.951	-32.877	1.00	46.11
ATOM	3377	CG	ARG B 847	21.254	7.928	-33.760	1.00	49.88
ATOM	3378	CD	ARG B 847	22.263	7.195	-34.602	1.00	50.73
ATOM	3379	NE	ARG B 847	21.564	6.353	-35.565	1.00	57.37
ATOM	3380	CZ	ARG B 847	20.873	5.264	-35.242	1.00	58.79
ATOM	3381	NH1	ARG B 847	20.794	4.872	-33.976	1.00	60.01
ATOM	3382	NH2	ARG B 847	20.243	4.576	-36.182	1.00	59.64
ATOM	3383	N	ASN B 848	18.610	9.683	-32.978	1.00	45.11
ATOM	3384	CA	ASN B 848	17.532	10.114	-33.848	1.00	45.22
ATOM	3385	C	ASN B 848	16.525	11.015	-33.132	1.00	47.16
ATOM	3386	O	ASN B 848	15.351	11.117	-33.525	1.00	46.11
ATOM	3387	CB	ASN B 848	16.840	8.917	-34.500	1.00	43.37
ATOM	3388	CG	ASN B 848	17.576	8.434	-35.736	1.00	44.82
ATOM	3389	OD1	ASN B 848	17.953	9.234	-36.596	1.00	47.01
ATOM	3390	ND2	ASN B 848	17.781	7.127	-35.838	1.00	42.89
ATOM	3391	N	VAL B 849	16.996	11.657	-32.065	1.00	47.02
ATOM	3392	CA	VAL B 849	16.181	12.606	-31.330	1.00	48.04
ATOM	3393	C	VAL B 849	16.951	13.914	-31.472	1.00	48.97
ATOM	3394	O	VAL B 849	18.134	13.987	-31.146	1.00	49.90
ATOM	3395	CB	VAL B 849	16.026	12.235	-29.829	1.00	48.21
ATOM	3396	CG1	VAL B 849	15.223	13.322	-29.109	1.00	48.81
ATOM	3397	CG2	VAL B 849	15.298	10.899	-29.689	1.00	46.65
ATOM	3398	N	LEU B 850	16.281	14.934	-31.995	1.00	50.30
ATOM	3399	CA	LEU B 850	16.900	16.234	-32.216	1.00	49.70
ATOM	3400	C	LEU B 850	16.503	17.241	-31.144	1.00	51.97
ATOM	3401	O	LEU B 850	15.449	17.116	-30.514	1.00	53.21
ATOM	3402	CB	LEU B 850	16.490	16.768	-33.583	1.00	46.49
ATOM	3403	CG	LEU B 850	16.660	15.825	-34.771	1.00	45.29
ATOM	3404	CD1	LEU B 850	16.076	16.481	-35.999	1.00	43.36
ATOM	3405	CD2	LEU B 850	18.120	15.500	-34.986	1.00	44.40
ATOM	3406	N	VAL B 851	17.352	18.249	-30.954	1.00	53.33
ATOM	3407	CA	VAL B 851	17.112	19.284	-29.960	1.00	53.66

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ATOM	3408	C	VAL B 851	16.731	20.610	-30.628	1.00	55.93
ATOM	3409	O	VAL B 851	17.595	21.317	-31.153	1.00	56.57
ATOM	3410	CB	VAL B 851	18.375	19.494	-29.094	1.00	52.04
ATOM	3411	CG1	VAL B 851	18.081	20.455	-27.966	1.00	53.25
ATOM	3412	CG2	VAL B 851	18.850	18.171	-28.540	1.00	50.16
ATOM	3413	N	LYS B 852	15.440	20.940	-30.624	1.00	57.66
ATOM	3414	CA	LYS B 852	14.982	22.196	-31.222	1.00	60.00
ATOM	3415	C	LYS B 852	15.497	23.295	-30.317	1.00	62.13
ATOM	3416	O	LYS B 852	15.977	24.328	-30.778	1.00	64.39
ATOM	3417	CB	LYS B 852	13.458	22.268	-31.272	1.00	58.87
ATOM	3418	CG	LYS B 852	12.923	23.615	-31.741	1.00	58.96
ATOM	3419	CD	LYS B 852	11.398	23.646	-31.691	1.00	60.41
ATOM	3420	CE	LYS B 852	10.817	24.892	-32.352	1.00	60.45
ATOM	3421	NZ	LYS B 852	9.312	24.862	-32.407	1.00	61.83
ATOM	3422	N	SER B 853	15.374	23.050	-29.017	1.00	61.87
ATOM	3423	CA	SER B 853	15.837	23.960	-27.980	1.00	61.38
ATOM	3424	C	SER B 853	15.945	23.145	-26.680	1.00	61.16
ATOM	3425	O	SER B 853	15.236	22.157	-26.489	1.00	58.97
ATOM	3426	CB	SER B 853	14.878	25.147	-27.822	1.00	59.92
ATOM	3427	OG	SER B 853	13.582	24.731	-27.445	1.00	61.79
ATOM	3428	N	PRO B 854	16.851	23.546	-25.780	1.00	61.17
ATOM	3429	CA	PRO B 854	17.076	22.865	-24.503	1.00	60.56
ATOM	3430	C	PRO B 854	15.876	22.143	-23.892	1.00	59.89
ATOM	3431	O	PRO B 854	15.957	20.959	-23.555	1.00	59.58
ATOM	3432	CB	PRO B 854	17.599	23.986	-23.625	1.00	61.16
ATOM	3433	CG	PRO B 854	18.478	24.738	-24.599	1.00	62.45
ATOM	3434	CD	PRO B 854	17.600	24.818	-25.834	1.00	62.08
ATOM	3435	N	ALA B 855	14.764	22.850	-23.762	1.00	57.36
ATOM	3436	CA	ALA B 855	13.576	22.269	-23.173	1.00	55.01
ATOM	3437	C	ALA B 855	12.621	21.699	-24.210	1.00	55.18
ATOM	3438	O	ALA B 855	11.440	21.533	-23.929	1.00	54.40
ATOM	3439	CB	ALA B 855	12.867	23.323	-22.354	1.00	54.10
ATOM	3440	N	HIS B 856	13.116	21.368	-25.399	1.00	55.23
ATOM	3441	CA	HIS B 856	12.222	20.881	-26.448	1.00	52.68
ATOM	3442	C	HIS B 856	12.891	19.970	-27.478	1.00	51.26
ATOM	3443	O	HIS B 856	13.649	20.427	-28.343	1.00	51.11
ATOM	3444	CB	HIS B 856	11.602	22.096	-27.148	1.00	53.04
ATOM	3445	CG	HIS B 856	10.492	21.766	-28.097	1.00	55.71
ATOM	3446	ND1	HIS B 856	9.868	22.714	-28.880	1.00	55.62
ATOM	3447	CD2	HIS B 856	9.902	20.583	-28.396	1.00	54.97
ATOM	3448	CE1	HIS B 856	8.943	22.129	-29.619	1.00	55.10
ATOM	3449	NE2	HIS B 856	8.942	20.837	-29.344	1.00	55.98
ATOM	3450	N	VAL B 857	12.602	18.677	-27.388	1.00	48.98
ATOM	3451	CA	VAL B 857	13.164	17.717	-28.328	1.00	47.33
ATOM	3452	C	VAL B 857	12.076	17.225	-29.291	1.00	46.32

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ATOM	3453	O	VAL B 857	10.877	17.362	-29.018	1.00	45.36
ATOM	3454	CB	VAL B 857	13.827	16.500	-27.593	1.00	46.33
ATOM	3455	CG1	VAL B 857	15.094	16.944	-26.897	1.00	44.86
ATOM	3456	CG2	VAL B 857	12.874	15.902	-26.581	1.00	44.39
ATOM	3457	N	LYS B 858	12.516	16.681	-30.425	1.00	44.31
ATOM	3458	CA	LYS B 858	11.636	16.145	-31.459	1.00	43.59
ATOM	3459	C	LYS B 858	12.222	14.849	-32.014	1.00	43.20
ATOM	3460	O	LYS B 858	13.438	14.753	-32.217	1.00	43.70
ATOM	3461	CB	LYS B 858	11.492	17.140	-32.614	1.00	44.67
ATOM	3462	CG	LYS B 858	10.538	18.301	-32.362	1.00	46.35
ATOM	3463	CD	LYS B 858	10.463	19.170	-33.610	1.00	46.33
ATOM	3464	CE	LYS B 858	9.382	20.215	-33.508	1.00	46.98
ATOM	3465	NZ	LYS B 858	9.214	20.892	-34.816	1.00	50.99
ATOM	3466	N	ILE B 859	11.367	13.855	-32.265	1.00	42.00
ATOM	3467	CA	ILE B 859	11.832	12.583	-32.816	1.00	39.14
ATOM	3468	C	ILE B 859	11.955	12.719	-34.328	1.00	39.96
ATOM	3469	O	ILE B 859	11.140	13.386	-34.966	1.00	40.22
ATOM	3470	CB	ILE B 859	10.863	11.431	-32.480	1.00	37.12
ATOM	3471	CG1	ILE B 859	10.738	11.297	-30.958	1.00	37.67
ATOM	3472	CG2	ILE B 859	11.384	10.129	-33.069	1.00	34.33
ATOM	3473	CD1	ILE B 859	9.834	10.171	-30.480	1.00	33.72
ATOM	3474	N	THR B 860	12.977	12.093	-34.900	1.00	41.18
ATOM	3475	CA	THR B 860	13.197	12.174	-36.342	1.00	43.70
ATOM	3476	C	THR B 860	13.596	10.844	-36.971	1.00	45.83
ATOM	3477	O	THR B 860	14.019	9.918	-36.278	1.00	47.50
ATOM	3478	CB	THR B 860	14.312	13.218	-36.688	1.00	42.70
ATOM	3479	OG1	THR B 860	14.311	13.486	-38.096	1.00	41.02
ATOM	3480	CG2	THR B 860	15.685	12.683	-36.317	1.00	41.73
ATOM	3481	N	ASP B 861	13.463	10.772	-38.294	1.00	46.92
ATOM	3482	CA	ASP B 861	13.839	9.597	-39.078	1.00	49.85
ATOM	3483	C	ASP B 861	12.873	8.419	-39.058	1.00	50.50
ATOM	3484	O	ASP B 861	13.233	7.317	-39.458	1.00	50.83
ATOM	3485	CB	ASP B 861	15.239	9.109	-38.680	1.00	50.52
ATOM	3486	CG	ASP B 861	16.070	8.688	-39.883	1.00	54.77
ATOM	3487	OD1	ASP B 861	16.304	9.533	-40.764	1.00	56.69
ATOM	3488	OD2	ASP B 861	16.495	7.518	-39.959	1.00	58.38
ATOM	3489	N	PHE B 862	11.649	8.633	-38.600	1.00	52.16
ATOM	3490	CA	PHE B 862	10.689	7.542	-38.606	1.00	55.68
ATOM	3491	C	PHE B 862	10.256	7.323	-40.057	1.00	58.32
ATOM	3492	O	PHE B 862	10.120	8.281	-40.823	1.00	59.56
ATOM	3493	CB	PHE B 862	9.472	7.873	-37.732	1.00	55.12
ATOM	3494	CG	PHE B 862	8.874	9.233	-37.995	1.00	54.59
ATOM	3495	CD1	PHE B 862	9.153	10.303	-37.149	1.00	54.37
ATOM	3496	CD2	PHE B 862	8.038	9.445	-39.085	1.00	53.46
ATOM	3497	CE1	PHE B 862	8.610	11.560	-37.385	1.00	53.72

ATOM	3498	CE2 PHE B 862	7.489	10.700	-39.331	1.00	52.07
ATOM	3499	CZ PHE B 862	7.777	11.757	-38.478	1.00	53.20
ATOM	3500	N GLY B 863	10.066	6.068	-40.446	1.00	60.33
ATOM	3501	CA GLY B 863	9.646	5.797	-41.809	1.00	64.81
ATOM	3502	C GLY B 863	10.679	5.163	-42.725	1.00	68.14
ATOM	3503	O GLY B 863	10.377	4.174	-43.393	1.00	68.10
ATOM	3504	N LEU B 864	11.887	5.726	-42.768	1.00	70.85
ATOM	3505	CA LEU B 864	12.952	5.194	-43.622	1.00	73.25
ATOM	3506	C LEU B 864	13.219	3.714	-43.386	1.00	74.47
ATOM	3507	O LEU B 864	13.373	2.950	-44.335	1.00	76.25
ATOM	3508	CB LEU B 864	14.267	5.949	-43.412	1.00	73.37
ATOM	3509	CG LEU B 864	14.399	7.414	-43.815	1.00	72.75
ATOM	3510	CD1 LEU B 864	15.853	7.800	-43.685	1.00	72.55
ATOM	3511	CD2 LEU B 864	13.925	7.633	-45.237	1.00	72.97
ATOM	3512	N ALA B 865	13.291	3.319	-42.121	1.00	74.99
ATOM	3513	CA ALA B 865	13.549	1.932	-41.769	1.00	75.61
ATOM	3514	C ALA B 865	12.791	0.967	-42.679	1.00	76.21
ATOM	3515	O ALA B 865	13.392	0.215	-43.456	1.00	76.63
ATOM	3516	CB ALA B 865	13.163	1.692	-40.322	1.00	76.18
ATOM	3517	N ARG B 866	11.467	1.001	-42.582	1.00	75.63
ATOM	3518	CA ARG B 866	10.615	0.127	-43.377	1.00	74.69
ATOM	3519	C ARG B 866	10.806	0.377	-44.866	1.00	72.85
ATOM	3520	O ARG B 866	10.788	-0.555	-45.672	1.00	72.17
ATOM	3521	CB ARG B 866	9.150	0.355	-43.010	1.00	77.16
ATOM	3522	CG ARG B 866	8.192	-0.678	-43.579	1.00	80.89
ATOM	3523	CD ARG B 866	6.766	-0.351	-43.162	1.00	84.67
ATOM	3524	NE ARG B 866	5.889	-1.518	-43.176	1.00	87.14
ATOM	3525	CZ ARG B 866	4.665	-1.535	-42.656	1.00	89.52
ATOM	3526	NH1 ARG B 866	4.169	-0.441	-42.081	1.00	89.56
ATOM	3527	NH2 ARG B 866	3.942	-2.648	-42.698	1.00	90.37
ATOM	3528	N LEU B 867	10.999	1.639	-45.229	1.00	69.43
ATOM	3529	CA LEU B 867	11.173	1.993	-46.630	1.00	68.73
ATOM	3530	C LEU B 867	12.416	1.394	-47.275	1.00	68.30
ATOM	3531	O LEU B 867	12.376	0.980	-48.433	1.00	68.60
ATOM	3532	CB LEU B 867	11.206	3.513	-46.801	1.00	67.15
ATOM	3533	CG LEU B 867	11.287	3.964	-48.258	1.00	63.74
ATOM	3534	CD1 LEU B 867	10.063	3.458	-49.008	1.00	62.81
ATOM	3535	CD2 LEU B 867	11.384	5.474	-48.331	1.00	61.46
ATOM	3536	N LEU B 868	13.516	1.348	-46.532	1.00	67.70
ATOM	3537	CA LEU B 868	14.759	0.810	-47.066	1.00	67.56
ATOM	3538	C LEU B 868	14.851	-0.703	-46.951	1.00	66.73
ATOM	3539	O LEU B 868	15.386	-1.361	-47.841	1.00	65.40
ATOM	3540	CB LEU B 868	15.963	1.446	-46.365	1.00	69.33
ATOM	3541	CG LEU B 868	15.984	2.976	-46.258	1.00	71.54
ATOM	3542	CD1 LEU B 868	17.337	3.418	-45.705	1.00	71.31

ATOM	3543	CD2 LEU B 868	15.719	3.613	-47.617	1.00	70.98
ATOM	3544	N GLU B 869	14.329	-1.263	-45.865	1.00	66.47
ATOM	3545	CA GLU B 869	14.393	-2.705	-45.692	1.00	66.24
ATOM	3546	C GLU B 869	13.191	-3.433	-46.271	1.00	65.56
ATOM	3547	O GLU B 869	13.276	-4.020	-47.345	1.00	66.35
ATOM	3548	CB GLU B 869	14.547	-3.055	-44.220	1.00	67.33
ATOM	3549	CG GLU B 869	15.784	-2.462	-43.592	1.00	69.61
ATOM	3550	CD GLU B 869	16.423	-3.390	-42.579	1.00	71.71
ATOM	3551	OE1 GLU B 869	15.728	-3.811	-41.620	1.00	70.66
ATOM	3552	OE2 GLU B 869	17.625	-3.697	-42.752	1.00	72.27
ATOM	3553	N GLY B 870	12.073	-3.396	-45.563	1.00	64.97
ATOM	3554	CA GLY B 870	10.888	-4.076	-46.041	1.00	64.73
ATOM	3555	C GLY B 870	10.238	-4.819	-44.900	1.00	65.26
ATOM	3556	O GLY B 870	10.555	-4.567	-43.744	1.00	64.41
ATOM	3557	N ASP B 871	9.344	-5.748	-45.216	1.00	66.68
ATOM	3558	CA ASP B 871	8.647	-6.501	-44.182	1.00	67.47
ATOM	3559	C ASP B 871	8.975	-7.982	-44.162	1.00	66.00
ATOM	3560	O ASP B 871	8.345	-8.747	-43.434	1.00	65.97
ATOM	3561	CB ASP B 871	7.137	-6.327	-44.351	1.00	72.20
ATOM	3562	CG ASP B 871	6.676	-4.927	-44.013	1.00	76.99
ATOM	3563	OD1 ASP B 871	6.783	-4.551	-42.824	1.00	80.07
ATOM	3564	OD2 ASP B 871	6.216	-4.204	-44.930	1.00	78.50
ATOM	3565	N GLU B 872	9.961	-8.389	-44.951	1.00	64.83
ATOM	3566	CA GLU B 872	10.333	-9.794	-45.018	1.00	63.94
ATOM	3567	C GLU B 872	10.666	-10.338	-43.631	1.00	61.57
ATOM	3568	O GLU B 872	11.580	-9.857	-42.963	1.00	60.56
ATOM	3569	CB GLU B 872	11.522	-9.969	-45.961	1.00	66.69
ATOM	3570	CG GLU B 872	11.932	-11.418	-46.172	1.00	71.91
ATOM	3571	CD GLU B 872	13.047	-11.569	-47.202	1.00	76.05
ATOM	3572	OE1 GLU B 872	13.408	-10.553	-47.842	1.00	76.98
ATOM	3573	OE2 GLU B 872	13.557	-12.702	-47.378	1.00	77.59
ATOM	3574	N ALA B 873	9.914	-11.342	-43.202	1.00	59.27
ATOM	3575	CA ALA B 873	10.124	-11.935	-41.894	1.00	57.77
ATOM	3576	C ALA B 873	11.549	-12.447	-41.719	1.00	58.33
ATOM	3577	O ALA B 873	12.171	-12.267	-40.668	1.00	56.59
ATOM	3578	CB ALA B 873	9.133	-13.070	-41.679	1.00	55.37
ATOM	3579	N ALA B 874	12.076	-13.086	-42.755	1.00	59.61
ATOM	3580	CA ALA B 874	13.418	-13.640	-42.666	1.00	60.12
ATOM	3581	C ALA B 874	14.500	-12.681	-43.134	1.00	60.09
ATOM	3582	O ALA B 874	14.395	-12.075	-44.203	1.00	60.48
ATOM	3583	CB ALA B 874	13.494	-14.949	-43.456	1.00	59.26
ATOM	3584	N TYR B 875	15.538	-12.542	-42.316	1.00	59.00
ATOM	3585	CA TYR B 875	16.667	-11.688	-42.655	1.00	58.29
ATOM	3586	C TYR B 875	17.575	-12.464	-43.595	1.00	58.10
ATOM	3587	O TYR B 875	17.824	-13.649	-43.388	1.00	57.86

ATOM	3588	CB	TYR B 875	17.487	-11.336	-41.414	1.00	58.23
ATOM	3589	CG	TYR B 875	16.842	-10.360	-40.466	1.00	58.80
ATOM	3590	CD1	TYR B 875	16.632	-9.033	-40.842	1.00	57.46
ATOM	3591	CD2	TYR B 875	16.456	-10.759	-39.185	1.00	56.30
ATOM	3592	CE1	TYR B 875	16.056	-8.126	-39.970	1.00	58.87
ATOM	3593	CE2	TYR B 875	15.879	-9.862	-38.303	1.00	59.49
ATOM	3594	CZ	TYR B 875	15.680	-8.543	-38.701	1.00	60.51
ATOM	3595	OH	TYR B 875	15.102	-7.645	-37.834	1.00	60.20
ATOM	3596	N	ASN B 876	18.060	-11.802	-44.634	1.00	58.32
ATOM	3597	CA	ASN B 876	18.984	-12.440	-45.550	1.00	58.92
ATOM	3598	C	ASN B 876	20.368	-12.237	-44.912	1.00	59.09
ATOM	3599	O	ASN B 876	20.457	-11.766	-43.775	1.00	57.47
ATOM	3600	CB	ASN B 876	18.879	-11.805	-46.943	1.00	59.97
ATOM	3601	CG	ASN B 876	18.810	-10.286	-46.903	1.00	65.32
ATOM	3602	OD1	ASN B 876	18.123	-9.696	-46.055	1.00	69.32
ATOM	3603	ND2	ASN B 876	19.505	-9.638	-47.836	1.00	65.71
ATOM	3604	N	ALA B 877	21.435	-12.596	-45.617	1.00	59.32
ATOM	3605	CA	ALA B 877	22.787	-12.466	-45.077	1.00	59.77
ATOM	3606	C	ALA B 877	23.238	-11.011	-44.883	1.00	61.45
ATOM	3607	O	ALA B 877	24.270	-10.746	-44.245	1.00	59.71
ATOM	3608	CB	ALA B 877	23.765	-13.201	-45.983	1.00	60.47
ATOM	3609	N	ASP B 878	22.459	-10.079	-45.434	1.00	62.48
ATOM	3610	CA	ASP B 878	22.753	-8.654	-45.334	1.00	62.92
ATOM	3611	C	ASP B 878	22.260	-8.132	-43.987	1.00	63.34
ATOM	3612	O	ASP B 878	22.660	-7.055	-43.548	1.00	63.62
ATOM	3613	CB	ASP B 878	22.067	-7.894	-46.479	1.00	62.83
ATOM	3614	CG	ASP B 878	22.688	-6.519	-46.737	1.00	64.73
ATOM	3615	OD1	ASP B 878	23.921	-6.442	-46.947	1.00	63.55
ATOM	3616	OD2	ASP B 878	21.938	-5.516	-46.745	1.00	64.59
ATOM	3617	N	GLY B 879	21.386	-8.902	-43.340	1.00	63.87
ATOM	3618	CA	GLY B 879	20.847	-8.516	-42.042	1.00	65.56
ATOM	3619	C	GLY B 879	19.955	-7.281	-42.027	1.00	65.90
ATOM	3620	O	GLY B 879	19.336	-6.933	-43.037	1.00	66.17
ATOM	3621	N	GLY B 880	19.885	-6.621	-40.873	1.00	65.12
ATOM	3622	CA	GLY B 880	19.074	-5.422	-40.754	1.00	64.82
ATOM	3623	C	GLY B 880	19.899	-4.157	-40.938	1.00	64.56
ATOM	3624	O	GLY B 880	21.107	-4.229	-41.141	1.00	64.99
ATOM	3625	N	ALA B 881	19.259	-2.995	-40.871	1.00	63.83
ATOM	3626	CA	ALA B 881	19.978	-1.736	-41.025	1.00	63.13
ATOM	3627	C	ALA B 881	20.131	-1.016	-39.686	1.00	62.11
ATOM	3628	O	ALA B 881	21.023	-0.188	-39.522	1.00	61.84
ATOM	3629	CB	ALA B 881	19.261	-0.835	-42.033	1.00	63.27
ATOM	3630	N	MET B 882	19.270	-1.334	-38.726	1.00	60.73
ATOM	3631	CA	MET B 882	19.346	-0.692	-37.422	1.00	60.66
ATOM	3632	C	MET B 882	20.388	-1.349	-36.543	1.00	57.66

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ATOM	3633	O	MET B 882	20.738	-2.505	-36.742	1.00	58.53
ATOM	3634	CB	MET B 882	18.006	-0.759	-36.692	1.00	64.90
ATOM	3635	CG	MET B 882	16.844	-0.168	-37.442	1.00	71.12
ATOM	3636	SD	MET B 882	16.275	-1.292	-38.702	1.00	79.62
ATOM	3637	CE	MET B 882	16.473	-0.256	-40.127	1.00	78.23
ATOM	3638	N	PRO B 883	20.906	-0.610	-35.558	1.00	54.95
ATOM	3639	CA	PRO B 883	21.910	-1.186	-34.666	1.00	54.93
ATOM	3640	C	PRO B 883	21.262	-2.267	-33.804	1.00	54.49
ATOM	3641	O	PRO B 883	20.201	-2.054	-33.239	1.00	55.33
ATOM	3642	CB	PRO B 883	22.392	0.022	-33.869	1.00	54.23
ATOM	3643	CG	PRO B 883	21.206	0.944	-33.882	1.00	55.31
ATOM	3644	CD	PRO B 883	20.719	0.826	-35.291	1.00	53.61
ATOM	3645	N	ILE B 884	21.904	-3.427	-33.710	1.00	55.18
ATOM	3646	CA	ILE B 884	21.363	-4.549	-32.949	1.00	54.75
ATOM	3647	C	ILE B 884	21.109	-4.230	-31.481	1.00	53.77
ATOM	3648	O	ILE B 884	20.193	-4.778	-30.871	1.00	52.49
ATOM	3649	CB	ILE B 884	22.315	-5.786	-32.997	1.00	57.45
ATOM	3650	CG1	ILE B 884	22.977	-5.911	-34.379	1.00	60.74
ATOM	3651	CG2	ILE B 884	21.522	-7.070	-32.704	1.00	56.49
ATOM	3652	CD1	ILE B 884	22.026	-6.282	-35.528	1.00	61.29
ATOM	3653	N	LYS B 885	21.912	-3.333	-30.919	1.00	53.13
ATOM	3654	CA	LYS B 885	21.809	-3.004	-29.499	1.00	51.92
ATOM	3655	C	LYS B 885	20.604	-2.183	-29.040	1.00	50.73
ATOM	3656	O	LYS B 885	20.309	-2.099	-27.850	1.00	50.67
ATOM	3657	CB	LYS B 885	23.118	-2.350	-29.052	1.00	51.96
ATOM	3658	CG	LYS B 885	24.316	-3.277	-29.214	1.00	49.00
ATOM	3659	CD	LYS B 885	25.597	-2.616	-28.766	1.00	52.24
ATOM	3660	CE	LYS B 885	26.798	-3.482	-29.122	1.00	53.83
ATOM	3661	NZ	LYS B 885	28.091	-2.784	-28.862	1.00	56.01
ATOM	3662	N	TRP B 886	19.900	-1.588	-29.985	1.00	48.96
ATOM	3663	CA	TRP B 886	18.728	-0.797	-29.667	1.00	47.71
ATOM	3664	C	TRP B 886	17.494	-1.600	-30.055	1.00	48.21
ATOM	3665	O	TRP B 886	16.363	-1.142	-29.899	1.00	49.83
ATOM	3666	CB	TRP B 886	18.765	0.501	-30.470	1.00	46.30
ATOM	3667	CG	TRP B 886	19.594	1.587	-29.863	1.00	46.96
ATOM	3668	CD1	TRP B 886	19.138	2.657	-29.145	1.00	45.46
ATOM	3669	CD2	TRP B 886	21.014	1.750	-29.965	1.00	47.38
ATOM	3670	NE1	TRP B 886	20.182	3.480	-28.802	1.00	45.52
ATOM	3671	CE2	TRP B 886	21.346	2.950	-29.293	1.00	46.37
ATOM	3672	CE3	TRP B 886	22.039	1.003	-30.560	1.00	48.54
ATOM	3673	CZ2	TRP B 886	22.661	3.422	-29.202	1.00	44.45
ATOM	3674	CZ3	TRP B 886	23.354	1.479	-30.468	1.00	48.55
ATOM	3675	CH2	TRP B 886	23.648	2.678	-29.793	1.00	43.97
ATOM	3676	N	MET B 887	17.731	-2.814	-30.536	1.00	47.39
ATOM	3677	CA	MET B 887	16.689	-3.702	-31.038	1.00	47.29

ATOM	3678	C	MET B 887	16.042	-4.632	-30.021	1.00	46.15
ATOM	3679	O	MET B 887	16.716	-5.188	-29.170	1.00	44.83
ATOM	3680	CB	MET B 887	17.299	-4.525	-32.182	1.00	49.51
ATOM	3681	CG	MET B 887	16.366	-4.953	-33.287	1.00	52.27
ATOM	3682	SD	MET B 887	17.296	-5.341	-34.809	1.00	53.59
ATOM	3683	CE	MET B 887	17.031	-3.843	-35.775	1.00	56.07
ATOM	3684	N	ALA B 888	14.723	-4.785	-30.119	1.00	48.05
ATOM	3685	CA	ALA B 888	13.962	-5.683	-29.240	1.00	48.80
ATOM	3686	C	ALA B 888	14.288	-7.110	-29.661	1.00	49.42
ATOM	3687	O	ALA B 888	14.361	-7.406	-30.856	1.00	49.12
ATOM	3688	CB	ALA B 888	12.460	-5.432	-29.386	1.00	47.59
ATOM	3689	N	LEU B 889	14.472	-7.988	-28.681	1.00	50.17
ATOM	3690	CA	LEU B 889	14.829	-9.376	-28.941	1.00	51.55
ATOM	3691	C	LEU B 889	14.145	-10.030	-30.124	1.00	53.37
ATOM	3692	O	LEU B 889	14.806	-10.463	-31.076	1.00	54.40
ATOM	3693	CB	LEU B 889	14.570	-10.230	-27.713	1.00	52.02
ATOM	3694	CG	LEU B 889	14.987	-11.690	-27.885	1.00	53.15
ATOM	3695	CD1	LEU B 889	16.443	-11.748	-28.320	1.00	52.50
ATOM	3696	CD2	LEU B 889	14.777	-12.445	-26.571	1.00	52.22
ATOM	3697	N	GLU B 890	12.822	-10.114	-30.067	1.00	53.20
ATOM	3698	CA	GLU B 890	12.079	-10.745	-31.146	1.00	54.27
ATOM	3699	C	GLU B 890	12.498	-10.227	-32.521	1.00	55.82
ATOM	3700	O	GLU B 890	12.562	-10.994	-33.480	1.00	57.28
ATOM	3701	CB	GLU B 890	10.566	-10.557	-30.955	1.00	52.93
ATOM	3702	CG	GLU B 890	10.094	-9.116	-31.001	1.00	50.27
ATOM	3703	CD	GLU B 890	10.080	-8.445	-29.634	1.00	48.34
ATOM	3704	OE1	GLU B 890	10.893	-8.842	-28.759	1.00	44.27
ATOM	3705	OE2	GLU B 890	9.260	-7.509	-29.453	1.00	42.51
ATOM	3706	N	CYS B 891	12.798	-8.935	-32.613	1.00	57.27
ATOM	3707	CA	CYS B 891	13.192	-8.336	-33.888	1.00	58.36
ATOM	3708	C	CYS B 891	14.617	-8.642	-34.313	1.00	58.40
ATOM	3709	O	CYS B 891	15.052	-8.274	-35.401	1.00	56.71
ATOM	3710	CB	CYS B 891	12.972	-6.826	-33.852	1.00	59.30
ATOM	3711	SG	CYS B 891	11.232	-6.370	-33.986	1.00	58.60
ATOM	3712	N	ILE B 892	15.352	-9.324	-33.457	1.00	59.69
ATOM	3713	CA	ILE B 892	16.708	-9.677	-33.812	1.00	60.78
ATOM	3714	C	ILE B 892	16.692	-10.959	-34.647	1.00	60.92
ATOM	3715	O	ILE B 892	17.492	-11.104	-35.556	1.00	61.20
ATOM	3716	CB	ILE B 892	17.584	-9.872	-32.549	1.00	60.34
ATOM	3717	CG1	ILE B 892	17.844	-8.516	-31.898	1.00	59.88
ATOM	3718	CG2	ILE B 892	18.892	-10.551	-32.910	1.00	58.41
ATOM	3719	CD1	ILE B 892	18.713	-8.585	-30.683	1.00	61.44
ATOM	3720	N	HIS B 893	15.766	-11.873	-34.350	1.00	61.38
ATOM	3721	CA	HIS B 893	15.676	-13.143	-35.071	1.00	60.14
ATOM	3722	C	HIS B 893	14.811	-13.131	-36.329	1.00	57.92

ATOM	3723	O	HIS B 893	15.010	-13.940	-37.232	1.00	56.94
ATOM	3724	CB	HIS B 893	15.195	-14.245	-34.127	1.00	61.71
ATOM	3725	CG	HIS B 893	16.205	-14.626	-33.092	1.00	65.26
ATOM	3726	ND1	HIS B 893	17.326	-15.375	-33.384	1.00	66.05
ATOM	3727	CD2	HIS B 893	16.239	-14.400	-31.756	1.00	65.76
ATOM	3728	CE1	HIS B 893	18.006	-15.596	-32.272	1.00	66.79
ATOM	3729	NE2	HIS B 893	17.368	-15.016	-31.270	1.00	67.66
ATOM	3730	N	TYR B 894	13.850	-12.218	-36.379	1.00	55.44
ATOM	3731	CA	TYR B 894	12.956	-12.082	-37.523	1.00	53.67
ATOM	3732	C	TYR B 894	12.491	-10.649	-37.482	1.00	52.79
ATOM	3733	O	TYR B 894	12.909	-9.893	-36.620	1.00	53.67
ATOM	3734	CB	TYR B 894	11.738	-13.000	-37.387	1.00	53.49
ATOM	3735	CG	TYR B 894	12.051	-14.469	-37.473	1.00	54.03
ATOM	3736	CD1	TYR B 894	12.231	-15.091	-38.706	1.00	54.75
ATOM	3737	CD2	TYR B 894	12.223	-15.228	-36.318	1.00	55.06
ATOM	3738	CE1	TYR B 894	12.580	-16.438	-38.784	1.00	57.69
ATOM	3739	CE2	TYR B 894	12.574	-16.571	-36.381	1.00	57.19
ATOM	3740	CZ	TYR B 894	12.755	-17.175	-37.616	1.00	59.22
ATOM	3741	OH	TYR B 894	13.136	-18.504	-37.679	1.00	61.11
ATOM	3742	N	ARG B 895	11.623	-10.269	-38.405	1.00	53.26
ATOM	3743	CA	ARG B 895	11.112	-8.912	-38.417	1.00	53.71
ATOM	3744	C	ARG B 895	9.726	-8.838	-37.788	1.00	55.40
ATOM	3745	O	ARG B 895	8.700	-8.972	-38.464	1.00	56.92
ATOM	3746	CB	ARG B 895	11.066	-8.363	-39.840	1.00	52.60
ATOM	3747	CG	ARG B 895	12.425	-8.042	-40.416	1.00	54.61
ATOM	3748	CD	ARG B 895	12.326	-6.918	-41.439	1.00	56.13
ATOM	3749	NE	ARG B 895	13.641	-6.505	-41.914	1.00	58.90
ATOM	3750	CZ	ARG B 895	14.368	-7.200	-42.781	1.00	61.14
ATOM	3751	NH1	ARG B 895	13.894	-8.343	-43.271	1.00	61.94
ATOM	3752	NH2	ARG B 895	15.571	-6.767	-43.144	1.00	58.94
ATOM	3753	N	ALA B 896	9.705	-8.634	-36.476	1.00	55.24
ATOM	3754	CA	ALA B 896	8.452	-8.519	-35.748	1.00	53.33
ATOM	3755	C	ALA B 896	8.350	-7.085	-35.215	1.00	51.36
ATOM	3756	O	ALA B 896	8.063	-6.872	-34.040	1.00	51.66
ATOM	3757	CB	ALA B 896	8.419	-9.536	-34.598	1.00	52.72
ATOM	3758	N	PHE B 897	8.592	-6.104	-36.086	1.00	48.95
ATOM	3759	CA	PHE B 897	8.535	-4.695	-35.683	1.00	46.93
ATOM	3760	C	PHE B 897	7.134	-4.237	-35.300	1.00	44.17
ATOM	3761	O	PHE B 897	6.209	-4.266	-36.106	1.00	42.11
ATOM	3762	CB	PHE B 897	9.093	-3.785	-36.787	1.00	47.63
ATOM	3763	CG	PHE B 897	10.572	-3.928	-36.993	1.00	50.51
ATOM	3764	CD1	PHE B 897	11.076	-4.474	-38.172	1.00	53.25
ATOM	3765	CD2	PHE B 897	11.465	-3.567	-35.988	1.00	50.87
ATOM	3766	CE1	PHE B 897	12.451	-4.662	-38.342	1.00	52.04
ATOM	3767	CE2	PHE B 897	12.835	-3.750	-36.148	1.00	50.84

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ATOM	3768	CZ	PHE B 897	13.329	-4.300	-37.326	1.00	52.35
ATOM	3769	N	THR B 898	6.997	-3.798	-34.055	1.00	42.52
ATOM	3770	CA	THR B 898	5.717	-3.352	-33.534	1.00	40.56
ATOM	3771	C	THR B 898	5.916	-2.231	-32.543	1.00	39.82
ATOM	3772	O	THR B 898	7.027	-1.983	-32.089	1.00	38.49
ATOM	3773	CB	THR B 898	5.000	-4.480	-32.779	1.00	39.38
ATOM	3774	OG1	THR B 898	5.744	-4.803	-31.602	1.00	39.33
ATOM	3775	CG2	THR B 898	4.881	-5.711	-33.638	1.00	37.90
ATOM	3776	N	HIS B 899	4.826	-1.558	-32.198	1.00	39.68
ATOM	3777	CA	HIS B 899	4.907	-0.487	-31.225	1.00	40.57
ATOM	3778	C	HIS B 899	5.672	-0.985	-29.998	1.00	39.75
ATOM	3779	O	HIS B 899	6.494	-0.262	-29.433	1.00	40.90
ATOM	3780	CB	HIS B 899	3.499	-0.040	-30.838	1.00	41.77
ATOM	3781	CG	HIS B 899	2.711	0.476	-31.994	1.00	44.38
ATOM	3782	ND1	HIS B 899	3.136	1.539	-32.765	1.00	46.58
ATOM	3783	CD2	HIS B 899	1.560	0.042	-32.554	1.00	44.66
ATOM	3784	CE1	HIS B 899	2.283	1.734	-33.752	1.00	45.15
ATOM	3785	NE2	HIS B 899	1.317	0.838	-33.648	1.00	47.56
ATOM	3786	N	GLN B 900	5.420	-2.227	-29.604	1.00	37.28
ATOM	3787	CA	GLN B 900	6.100	-2.770	-28.452	1.00	38.27
ATOM	3788	C	GLN B 900	7.608	-2.902	-28.658	1.00	38.64
ATOM	3789	O	GLN B 900	8.374	-2.701	-27.717	1.00	39.27
ATOM	3790	CB	GLN B 900	5.492	-4.112	-28.045	1.00	38.52
ATOM	3791	CG	GLN B 900	4.165	-3.987	-27.302	1.00	39.82
ATOM	3792	CD	GLN B 900	4.050	-2.696	-26.472	1.00	43.54
ATOM	3793	OE1	GLN B 900	3.859	-1.614	-27.025	1.00	46.46
ATOM	3794	NE2	GLN B 900	4.161	-2.812	-25.145	1.00	44.27
ATOM	3795	N	SER B 901	8.048	-3.226	-29.872	1.00	36.36
ATOM	3796	CA	SER B 901	9.482	-3.340	-30.110	1.00	35.93
ATOM	3797	C	SER B 901	10.093	-1.938	-30.014	1.00	37.71
ATOM	3798	O	SER B 901	11.239	-1.759	-29.584	1.00	35.11
ATOM	3799	CB	SER B 901	9.773	-3.993	-31.472	1.00	35.40
ATOM	3800	OG	SER B 901	9.213	-3.299	-32.566	1.00	35.60
ATOM	3801	N	ASP B 902	9.302	-0.936	-30.387	1.00	36.58
ATOM	3802	CA	ASP B 902	9.753	0.436	-30.297	1.00	35.05
ATOM	3803	C	ASP B 902	9.918	0.797	-28.816	1.00	35.23
ATOM	3804	O	ASP B 902	10.766	1.618	-28.453	1.00	31.03
ATOM	3805	CB	ASP B 902	8.738	1.368	-30.961	1.00	35.87
ATOM	3806	CG	ASP B 902	9.065	1.646	-32.421	1.00	38.00
ATOM	3807	OD1	ASP B 902	10.043	1.066	-32.944	1.00	35.01
ATOM	3808	OD2	ASP B 902	8.341	2.454	-33.043	1.00	40.53
ATOM	3809	N	VAL B 903	9.112	0.179	-27.957	1.00	34.13
ATOM	3810	CA	VAL B 903	9.214	0.479	-26.538	1.00	36.81
ATOM	3811	C	VAL B 903	10.559	0.008	-26.010	1.00	37.63
ATOM	3812	O	VAL B 903	11.184	0.674	-25.180	1.00	37.43

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ATOM	3813	CB	VAL B 903	8.075	-0.178	-25.727	1.00	38.45
ATOM	3814	CG1	VAL B 903	8.380	-0.100	-24.229	1.00	37.24
ATOM	3815	CG2	VAL B 903	6.763	0.533	-26.026	1.00	37.24
ATOM	3816	N	TRP B 904	11.005	-1.144	-26.498	1.00	39.08
ATOM	3817	CA	TRP B 904	12.297	-1.674	-26.092	1.00	37.59
ATOM	3818	C	TRP B 904	13.332	-0.601	-26.441	1.00	34.67
ATOM	3819	O	TRP B 904	14.129	-0.203	-25.602	1.00	32.68
ATOM	3820	CB	TRP B 904	12.600	-2.980	-26.848	1.00	40.25
ATOM	3821	CG	TRP B 904	13.943	-3.588	-26.523	1.00	41.50
ATOM	3822	CD1	TRP B 904	15.160	-3.031	-26.742	1.00	39.65
ATOM	3823	CD2	TRP B 904	14.190	-4.857	-25.891	1.00	43.17
ATOM	3824	NE1	TRP B 904	16.153	-3.861	-26.285	1.00	42.57
ATOM	3825	CE2	TRP B 904	15.588	-4.991	-25.759	1.00	43.45
ATOM	3826	CE3	TRP B 904	13.364	-5.892	-25.424	1.00	45.15
ATOM	3827	CZ2	TRP B 904	16.188	-6.123	-25.176	1.00	45.09
ATOM	3828	CZ3	TRP B 904	13.962	-7.024	-24.839	1.00	45.21
ATOM	3829	CH2	TRP B 904	15.360	-7.125	-24.724	1.00	44.37
ATOM	3830	N	SER B 905	13.296	-0.123	-27.678	1.00	32.67
ATOM	3831	CA	SER B 905	14.233	0.895	-28.120	1.00	34.81
ATOM	3832	C	SER B 905	14.182	2.102	-27.190	1.00	35.70
ATOM	3833	O	SER B 905	15.214	2.596	-26.727	1.00	35.81
ATOM	3834	CB	SER B 905	13.904	1.309	-29.548	1.00	35.88
ATOM	3835	OG	SER B 905	13.939	0.183	-30.404	1.00	34.89
ATOM	3836	N	TYR B 906	12.963	2.556	-26.920	1.00	37.42
ATOM	3837	CA	TYR B 906	12.712	3.679	-26.032	1.00	36.19
ATOM	3838	C	TYR B 906	13.517	3.478	-24.763	1.00	36.71
ATOM	3839	O	TYR B 906	14.208	4.378	-24.304	1.00	35.97
ATOM	3840	CB	TYR B 906	11.226	3.741	-25.677	1.00	36.25
ATOM	3841	CG	TYR B 906	10.889	4.865	-24.733	1.00	35.80
ATOM	3842	CD1	TYR B 906	10.571	6.130	-25.212	1.00	33.13
ATOM	3843	CD2	TYR B 906	10.983	4.683	-23.362	1.00	37.44
ATOM	3844	CE1	TYR B 906	10.369	7.183	-24.360	1.00	36.10
ATOM	3845	CE2	TYR B 906	10.782	5.738	-22.489	1.00	40.97
ATOM	3846	CZ	TYR B 906	10.479	6.991	-22.994	1.00	39.58
ATOM	3847	OH	TYR B 906	10.328	8.050	-22.125	1.00	39.67
ATOM	3848	N	GLY B 907	13.409	2.289	-24.189	1.00	36.90
ATOM	3849	CA	GLY B 907	14.150	1.995	-22.982	1.00	38.61
ATOM	3850	C	GLY B 907	15.642	2.197	-23.171	1.00	41.80
ATOM	3851	O	GLY B 907	16.285	2.870	-22.362	1.00	41.26
ATOM	3852	N	VAL B 908	16.196	1.616	-24.238	1.00	43.21
ATOM	3853	CA	VAL B 908	17.626	1.728	-24.527	1.00	42.16
ATOM	3854	C	VAL B 908	17.967	3.191	-24.740	1.00	42.43
ATOM	3855	O	VAL B 908	19.041	3.655	-24.358	1.00	42.57
ATOM	3856	CB	VAL B 908	18.013	0.928	-25.794	1.00	43.20
ATOM	3857	CG1	VAL B 908	19.510	1.037	-26.052	1.00	42.14

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ATOM	3858	CG2 VAL B 908	17.626	-0.525	-25.622	1.00	42.76
ATOM	3859	N THR B 909	17.034	3.919	-25.338	1.00	40.59
ATOM	3860	CA THR B 909	17.239	5.333	-25.583	1.00	40.05
ATOM	3861	C THR B 909	17.318	6.168	-24.318	1.00	41.07
ATOM	3862	O THR B 909	18.227	6.971	-24.180	1.00	44.18
ATOM	3863	CB THR B 909	16.133	5.925	-26.447	1.00	38.19
ATOM	3864	OG1 THR B 909	16.119	5.268	-27.717	1.00	37.26
ATOM	3865	CG2 THR B 909	16.375	7.413	-26.658	1.00	35.17
ATOM	3866	N ILE B 910	16.383	6.006	-23.390	1.00	41.77
ATOM	3867	CA ILE B 910	16.459	6.830	-22.191	1.00	44.01
ATOM	3868	C ILE B 910	17.678	6.440	-21.365	1.00	43.93
ATOM	3869	O ILE B 910	18.162	7.222	-20.537	1.00	43.25
ATOM	3870	CB ILE B 910	15.171	6.768	-21.323	1.00	44.35
ATOM	3871	CG1 ILE B 910	15.014	5.394	-20.688	1.00	45.86
ATOM	3872	CG2 ILE B 910	13.960	7.146	-22.179	1.00	44.14
ATOM	3873	CD1 ILE B 910	13.834	5.285	-19.766	1.00	45.31
ATOM	3874	N TRP B 911	18.179	5.233	-21.611	1.00	43.13
ATOM	3875	CA TRP B 911	19.369	4.746	-20.927	1.00	41.24
ATOM	3876	C TRP B 911	20.542	5.605	-21.424	1.00	41.42
ATOM	3877	O TRP B 911	21.375	6.032	-20.629	1.00	41.37
ATOM	3878	CB TRP B 911	19.600	3.279	-21.265	1.00	42.93
ATOM	3879	CG TRP B 911	20.768	2.671	-20.582	1.00	46.13
ATOM	3880	CD1 TRP B 911	20.778	2.044	-19.370	1.00	48.07
ATOM	3881	CD2 TRP B 911	22.120	2.647	-21.058	1.00	47.88
ATOM	3882	NE1 TRP B 911	22.053	1.629	-19.059	1.00	48.23
ATOM	3883	CE2 TRP B 911	22.897	1.988	-20.078	1.00	48.28
ATOM	3884	CE3 TRP B 911	22.751	3.123	-22.216	1.00	46.20
ATOM	3885	CZ2 TRP B 911	24.274	1.792	-20.221	1.00	45.73
ATOM	3886	CZ3 TRP B 911	24.120	2.928	-22.355	1.00	46.02
ATOM	3887	CH2 TRP B 911	24.865	2.268	-21.362	1.00	45.66
ATOM	3888	N GLU B 912	20.600	5.874	-22.728	1.00	40.12
ATOM	3889	CA GLU B 912	21.673	6.703	-23.263	1.00	42.28
ATOM	3890	C GLU B 912	21.616	8.051	-22.573	1.00	43.95
ATOM	3891	O GLU B 912	22.649	8.627	-22.228	1.00	45.55
ATOM	3892	CB GLU B 912	21.524	6.955	-24.759	1.00	41.44
ATOM	3893	CG GLU B 912	21.505	5.742	-25.635	1.00	44.81
ATOM	3894	CD GLU B 912	21.220	6.107	-27.081	1.00	47.97
ATOM	3895	OE1 GLU B 912	22.153	6.551	-27.790	1.00	44.98
ATOM	3896	OE2 GLU B 912	20.049	5.964	-27.502	1.00	50.02
ATOM	3897	N LEU B 913	20.402	8.558	-22.374	1.00	44.41
ATOM	3898	CA LEU B 913	20.235	9.857	-21.734	1.00	43.18
ATOM	3899	C LEU B 913	20.652	9.823	-20.270	1.00	43.99
ATOM	3900	O LEU B 913	21.414	10.675	-19.823	1.00	44.57
ATOM	3901	CB LEU B 913	18.787	10.332	-21.862	1.00	40.85
ATOM	3902	CG LEU B 913	18.216	10.396	-23.286	1.00	41.67

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ATOM	3903	CD1 LEU B 913	16.795	10.945	-23.221	1.00	39.11
ATOM	3904	CD2 LEU B 913	19.089	11.283	-24.187	1.00	38.24
ATOM	3905	N MET B 914	20.158	8.843	-19.519	1.00	45.82
ATOM	3906	CA MET B 914	20.513	8.742	-18.109	1.00	48.13
ATOM	3907	C MET B 914	22.023	8.596	-17.917	1.00	48.88
ATOM	3908	O MET B 914	22.553	8.972	-16.864	1.00	48.55
ATOM	3909	CB MET B 914	19.796	7.564	-17.443	1.00	50.82
ATOM	3910	CG MET B 914	18.292	7.740	-17.317	1.00	52.72
ATOM	3911	SD MET B 914	17.787	9.437	-16.952	1.00	53.52
ATOM	3912	CE MET B 914	16.626	9.705	-18.264	1.00	52.21
ATOM	3913	N THR B 915	22.710	8.048	-18.923	1.00	47.30
ATOM	3914	CA THR B 915	24.163	7.892	-18.849	1.00	46.63
ATOM	3915	C THR B 915	24.875	9.052	-19.562	1.00	48.58
ATOM	3916	O THR B 915	26.059	8.968	-19.886	1.00	48.03
ATOM	3917	CB THR B 915	24.642	6.559	-19.474	1.00	44.86
ATOM	3918	OG1 THR B 915	24.277	6.516	-20.860	1.00	44.85
ATOM	3919	CG2 THR B 915	24.043	5.373	-18.737	1.00	42.30
ATOM	3920	N PHE B 916	24.148	10.135	-19.809	1.00	50.49
ATOM	3921	CA PHE B 916	24.731	11.297	-20.463	1.00	52.07
ATOM	3922	C PHE B 916	25.505	10.901	-21.717	1.00	54.08
ATOM	3923	O PHE B 916	26.687	11.222	-21.848	1.00	56.00
ATOM	3924	CB PHE B 916	25.669	12.010	-19.489	1.00	52.26
ATOM	3925	CG PHE B 916	24.972	12.617	-18.305	1.00	52.03
ATOM	3926	CD1 PHE B 916	24.174	13.747	-18.452	1.00	52.39
ATOM	3927	CD2 PHE B 916	25.128	12.076	-17.040	1.00	52.11
ATOM	3928	CE1 PHE B 916	23.547	14.329	-17.356	1.00	51.26
ATOM	3929	CE2 PHE B 916	24.502	12.654	-15.938	1.00	52.35
ATOM	3930	CZ PHE B 916	23.713	13.781	-16.097	1.00	50.17
ATOM	3931	N GLY B 917	24.845	10.188	-22.626	1.00	54.77
ATOM	3932	CA GLY B 917	25.489	9.772	-23.863	1.00	53.58
ATOM	3933	C GLY B 917	26.130	8.392	-23.882	1.00	54.28
ATOM	3934	O GLY B 917	26.799	8.047	-24.858	1.00	56.32
ATOM	3935	N GLY B 918	25.925	7.596	-22.834	1.00	52.63
ATOM	3936	CA GLY B 918	26.519	6.268	-22.777	1.00	51.85
ATOM	3937	C GLY B 918	26.302	5.358	-23.977	1.00	53.07
ATOM	3938	O GLY B 918	25.357	5.533	-24.748	1.00	53.60
ATOM	3939	N LYS B 919	27.184	4.375	-24.136	1.00	53.42
ATOM	3940	CA LYS B 919	27.083	3.430	-25.241	1.00	53.94
ATOM	3941	C LYS B 919	26.529	2.081	-24.777	1.00	54.09
ATOM	3942	O LYS B 919	27.059	1.461	-23.853	1.00	53.78
ATOM	3943	CB LYS B 919	28.451	3.224	-25.898	1.00	56.15
ATOM	3944	CG LYS B 919	29.088	4.504	-26.440	1.00	60.22
ATOM	3945	CD LYS B 919	30.229	4.199	-27.399	1.00	62.11
ATOM	3946	CE LYS B 919	29.703	3.490	-28.644	1.00	65.81
ATOM	3947	NZ LYS B 919	30.785	3.065	-29.581	1.00	68.08

ATOM	3948	N	PRO B 920	25.449	1.609	-25.424	1.00	53.96
ATOM	3949	CA	PRO B 920	24.779	0.340	-25.122	1.00	52.93
ATOM	3950	C	PRO B 920	25.730	-0.832	-25.235	1.00	52.53
ATOM	3951	O	PRO B 920	26.390	-0.994	-26.254	1.00	51.03
ATOM	3952	CB	PRO B 920	23.685	0.259	-26.184	1.00	52.25
ATOM	3953	CG	PRO B 920	23.412	1.669	-26.510	1.00	54.01
ATOM	3954	CD	PRO B 920	24.783	2.283	-26.550	1.00	53.55
ATOM	3955	N	TYR B 921	25.774	-1.658	-24.197	1.00	54.38
ATOM	3956	CA	TYR B 921	26.649	-2.823	-24.182	1.00	57.62
ATOM	3957	C	TYR B 921	28.007	-2.445	-24.764	1.00	60.38
ATOM	3958	O	TYR B 921	28.491	-3.075	-25.707	1.00	61.02
ATOM	3959	CB	TYR B 921	26.022	-3.958	-24.992	1.00	56.19
ATOM	3960	CG	TYR B 921	24.546	-4.115	-24.735	1.00	53.82
ATOM	3961	CD1	TYR B 921	23.612	-3.483	-25.551	1.00	54.08
ATOM	3962	CD2	TYR B 921	24.084	-4.862	-23.658	1.00	51.52
ATOM	3963	CE1	TYR B 921	22.257	-3.588	-25.303	1.00	53.70
ATOM	3964	CE2	TYR B 921	22.730	-4.975	-23.396	1.00	52.18
ATOM	3965	CZ	TYR B 921	21.820	-4.337	-24.223	1.00	53.77
ATOM	3966	OH	TYR B 921	20.474	-4.454	-23.983	1.00	52.26
ATOM	3967	N	ASP B 922	28.605	-1.409	-24.184	1.00	63.62
ATOM	3968	CA	ASP B 922	29.895	-0.888	-24.616	1.00	67.06
ATOM	3969	C	ASP B 922	30.960	-1.967	-24.783	1.00	68.44
ATOM	3970	O	ASP B 922	31.239	-2.732	-23.857	1.00	67.06
ATOM	3971	CB	ASP B 922	30.400	0.152	-23.616	1.00	69.17
ATOM	3972	CG	ASP B 922	31.481	1.037	-24.200	1.00	70.95
ATOM	3973	OD1	ASP B 922	32.337	0.521	-24.957	1.00	72.34
ATOM	3974	OD2	ASP B 922	31.478	2.250	-23.894	1.00	70.84
ATOM	3975	N	GLY B 923	31.556	-2.008	-25.971	1.00	70.59
ATOM	3976	CA	GLY B 923	32.595	-2.980	-26.257	1.00	72.18
ATOM	3977	C	GLY B 923	32.100	-4.329	-26.747	1.00	72.53
ATOM	3978	O	GLY B 923	32.580	-4.834	-27.759	1.00	74.13
ATOM	3979	N	ILE B 924	31.142	-4.909	-26.032	1.00	71.67
ATOM	3980	CA	ILE B 924	30.591	-6.215	-26.373	1.00	70.50
ATOM	3981	C	ILE B 924	30.351	-6.414	-27.872	1.00	71.43
ATOM	3982	O	ILE B 924	29.838	-5.527	-28.556	1.00	71.73
ATOM	3983	CB	ILE B 924	29.278	-6.462	-25.597	1.00	69.48
ATOM	3984	CG1	ILE B 924	29.545	-6.319	-24.091	1.00	68.05
ATOM	3985	CG2	ILE B 924	28.729	-7.850	-25.917	1.00	67.40
ATOM	3986	CD1	ILE B 924	28.299	-6.301	-23.212	1.00	69.45
ATOM	3987	N	PRO B 925	30.737	-7.594	-28.398	1.00	71.75
ATOM	3988	CA	PRO B 925	30.619	-8.024	-29.799	1.00	71.06
ATOM	3989	C	PRO B 925	29.197	-8.007	-30.368	1.00	69.91
ATOM	3990	O	PRO B 925	28.333	-8.764	-29.935	1.00	68.95
ATOM	3991	CB	PRO B 925	31.191	-9.442	-29.774	1.00	71.99
ATOM	3992	CG	PRO B 925	32.182	-9.390	-28.661	1.00	72.05

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ATOM	3993	CD	PRO B 925	31.432	-8.625	-27.604	1.00	72.02
ATOM	3994	N	THR B 926	28.977	-7.158	-31.361	1.00	69.43
ATOM	3995	CA	THR B 926	27.675	-7.030	-32.002	1.00	69.48
ATOM	3996	C	THR B 926	26.961	-8.380	-32.208	1.00	69.75
ATOM	3997	O	THR B 926	25.747	-8.486	-32.028	1.00	70.07
ATOM	3998	CB	THR B 926	27.826	-6.287	-33.366	1.00	70.00
ATOM	3999	OG1	THR B 926	26.543	-6.131	-33.980	1.00	68.48
ATOM	4000	CG2	THR B 926	28.766	-7.055	-34.309	1.00	70.72
ATOM	4001	N	ALA B 927	27.716	-9.412	-32.566	1.00	69.65
ATOM	4002	CA	ALA B 927	27.140	-10.732	-32.804	1.00	68.51
ATOM	4003	C	ALA B 927	26.683	-11.403	-31.510	1.00	68.30
ATOM	4004	O	ALA B 927	25.807	-12.270	-31.526	1.00	68.58
ATOM	4005	CB	ALA B 927	28.165	-11.626	-33.527	1.00	66.12
ATOM	4006	N	GLU B 928	27.272	-10.992	-30.392	1.00	68.00
ATOM	4007	CA	GLU B 928	26.958	-11.577	-29.090	1.00	68.38
ATOM	4008	C	GLU B 928	25.634	-11.170	-28.463	1.00	66.53
ATOM	4009	O	GLU B 928	25.007	-11.959	-27.753	1.00	64.89
ATOM	4010	CB	GLU B 928	28.075	-11.270	-28.088	1.00	71.51
ATOM	4011	CG	GLU B 928	29.263	-12.221	-28.136	1.00	75.50
ATOM	4012	CD	GLU B 928	30.041	-12.231	-26.826	1.00	79.00
ATOM	4013	OE1	GLU B 928	30.933	-13.095	-26.662	1.00	81.12
ATOM	4014	OE2	GLU B 928	29.760	-11.374	-25.957	1.00	79.77
ATOM	4015	N	ILE B 929	25.220	-9.936	-28.714	1.00	64.75
ATOM	4016	CA	ILE B 929	23.987	-9.415	-28.147	1.00	63.35
ATOM	4017	C	ILE B 929	22.858	-10.446	-28.077	1.00	63.03
ATOM	4018	O	ILE B 929	22.337	-10.734	-26.998	1.00	61.05
ATOM	4019	CB	ILE B 929	23.520	-8.184	-28.932	1.00	61.08
ATOM	4020	CG1	ILE B 929	24.652	-7.155	-28.994	1.00	58.47
ATOM	4021	CG2	ILE B 929	22.284	-7.600	-28.286	1.00	62.49
ATOM	4022	CD1	ILE B 929	25.199	-6.739	-27.651	1.00	53.78
ATOM	4023	N	PRO B 930	22.474	-11.026	-29.225	1.00	63.06
ATOM	4024	CA	PRO B 930	21.402	-12.024	-29.257	1.00	63.56
ATOM	4025	C	PRO B 930	21.495	-13.082	-28.155	1.00	64.62
ATOM	4026	O	PRO B 930	20.516	-13.350	-27.452	1.00	64.41
ATOM	4027	CB	PRO B 930	21.541	-12.617	-30.652	1.00	62.01
ATOM	4028	CG	PRO B 930	21.934	-11.428	-31.446	1.00	62.44
ATOM	4029	CD	PRO B 930	22.998	-10.792	-30.581	1.00	61.86
ATOM	4030	N	ASP B 931	22.668	-13.686	-28.004	1.00	65.47
ATOM	4031	CA	ASP B 931	22.839	-14.703	-26.982	1.00	66.27
ATOM	4032	C	ASP B 931	22.656	-14.072	-25.616	1.00	65.47
ATOM	4033	O	ASP B 931	21.839	-14.537	-24.821	1.00	64.75
ATOM	4034	CB	ASP B 931	24.227	-15.345	-27.078	1.00	70.06
ATOM	4035	CG	ASP B 931	24.483	-16.356	-25.967	1.00	73.85
ATOM	4036	OD1	ASP B 931	23.678	-17.313	-25.835	1.00	75.74
ATOM	4037	OD2	ASP B 931	25.484	-16.189	-25.228	1.00	74.15

ATOM	4038	N	LEU B 932	23.419	-13.011	-25.353	1.00	65.40
ATOM	4039	CA	LEU B 932	23.349	-12.298	-24.080	1.00	65.25
ATOM	4040	C	LEU B 932	21.902	-12.006	-23.678	1.00	65.94
ATOM	4041	O	LEU B 932	21.452	-12.390	-22.594	1.00	65.04
ATOM	4042	CB	LEU B 932	24.130	-10.982	-24.161	1.00	65.95
ATOM	4043	CG	LEU B 932	25.660	-11.055	-24.245	1.00	68.42
ATOM	4044	CD1	LEU B 932	26.237	-9.642	-24.271	1.00	69.04
ATOM	4045	CD2	LEU B 932	26.219	-11.823	-23.044	1.00	68.73
ATOM	4046	N	LEU B 933	21.173	-11.334	-24.562	1.00	65.07
ATOM	4047	CA	LEU B 933	19.787	-10.989	-24.298	1.00	64.62
ATOM	4048	C	LEU B 933	18.923	-12.152	-23.810	1.00	64.97
ATOM	4049	O	LEU B 933	18.110	-11.980	-22.899	1.00	65.95
ATOM	4050	CB	LEU B 933	19.166	-10.368	-25.548	1.00	63.72
ATOM	4051	CG	LEU B 933	19.756	-9.012	-25.939	1.00	63.23
ATOM	4052	CD1	LEU B 933	19.177	-8.570	-27.271	1.00	61.73
ATOM	4053	CD2	LEU B 933	19.464	-7.986	-24.852	1.00	61.35
ATOM	4054	N	GLU B 934	19.096	-13.331	-24.397	1.00	64.87
ATOM	4055	CA	GLU B 934	18.294	-14.487	-23.997	1.00	65.11
ATOM	4056	C	GLU B 934	18.805	-15.154	-22.730	1.00	63.75
ATOM	4057	O	GLU B 934	18.163	-16.050	-22.199	1.00	63.55
ATOM	4058	CB	GLU B 934	18.220	-15.494	-25.148	1.00	66.18
ATOM	4059	CG	GLU B 934	17.478	-14.925	-26.342	1.00	71.36
ATOM	4060	CD	GLU B 934	17.763	-15.642	-27.649	1.00	74.08
ATOM	4061	OE1	GLU B 934	18.950	-15.765	-28.029	1.00	75.67
ATOM	4062	OE2	GLU B 934	16.790	-16.066	-28.306	1.00	76.95
ATOM	4063	N	LYS B 935	19.958	-14.705	-22.249	1.00	63.26
ATOM	4064	CA	LYS B 935	20.558	-15.241	-21.032	1.00	63.78
ATOM	4065	C	LYS B 935	20.263	-14.297	-19.867	1.00	64.04
ATOM	4066	O	LYS B 935	20.830	-14.442	-18.783	1.00	65.10
ATOM	4067	CB	LYS B 935	22.077	-15.366	-21.185	1.00	64.14
ATOM	4068	CG	LYS B 935	22.556	-16.374	-22.206	1.00	65.76
ATOM	4069	CD	LYS B 935	22.334	-17.790	-21.719	1.00	68.99
ATOM	4070	CE	LYS B 935	23.035	-18.799	-22.610	1.00	70.04
ATOM	4071	NZ	LYS B 935	22.771	-20.184	-22.139	1.00	71.50
ATOM	4072	N	GLY B 936	19.406	-13.308	-20.105	1.00	62.82
ATOM	4073	CA	GLY B 936	19.055	-12.373	-19.051	1.00	61.39
ATOM	4074	C	GLY B 936	19.872	-11.097	-18.997	1.00	60.41
ATOM	4075	O	GLY B 936	19.600	-10.219	-18.185	1.00	60.95
ATOM	4076	N	GLU B 937	20.875	-10.987	-19.857	1.00	59.63
ATOM	4077	CA	GLU B 937	21.729	-9.797	-19.903	1.00	58.26
ATOM	4078	C	GLU B 937	20.903	-8.522	-20.150	1.00	56.06
ATOM	4079	O	GLU B 937	20.057	-8.496	-21.038	1.00	55.96
ATOM	4080	CB	GLU B 937	22.757	-9.958	-21.033	1.00	58.85
ATOM	4081	CG	GLU B 937	23.808	-8.877	-21.113	1.00	61.46
ATOM	4082	CD	GLU B 937	24.884	-9.045	-20.069	1.00	64.22

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ATOM	4083	OE1 GLU B 937	25.719	-8.129	-19.921	1.00	66.78
ATOM	4084	OE2 GLU B 937	24.900	-10.099	-19.401	1.00	66.18
ATOM	4085	N ARG B 938	21.135	-7.474	-19.366	1.00	53.07
ATOM	4086	CA ARG B 938	20.427	-6.213	-19.567	1.00	51.85
ATOM	4087	C ARG B 938	21.322	-5.046	-19.211	1.00	52.49
ATOM	4088	O ARG B 938	22.249	-5.179	-18.405	1.00	54.14
ATOM	4089	CB ARG B 938	19.154	-6.132	-18.728	1.00	49.08
ATOM	4090	CG ARG B 938	18.047	-7.023	-19.212	1.00	48.98
ATOM	4091	CD ARG B 938	17.653	-6.678	-20.629	1.00	51.23
ATOM	4092	NE ARG B 938	17.145	-7.859	-21.322	1.00	56.53
ATOM	4093	CZ ARG B 938	16.012	-8.471	-21.015	1.00	57.01
ATOM	4094	NH1 ARG B 938	15.267	-8.003	-20.025	1.00	62.70
ATOM	4095	NH2 ARG B 938	15.631	-9.549	-21.682	1.00	55.07
ATOM	4096	N LEU B 939	21.043	-3.898	-19.813	1.00	50.95
ATOM	4097	CA LEU B 939	21.832	-2.715	-19.547	1.00	51.34
ATOM	4098	C LEU B 939	21.867	-2.401	-18.049	1.00	51.66
ATOM	4099	O LEU B 939	20.869	-2.544	-17.343	1.00	50.27
ATOM	4100	CB LEU B 939	21.282	-1.534	-20.349	1.00	49.96
ATOM	4101	CG LEU B 939	21.558	-1.689	-21.849	1.00	49.98
ATOM	4102	CD1 LEU B 939	20.779	-0.666	-22.664	1.00	47.22
ATOM	4103	CD2 LEU B 939	23.050	-1.561	-22.078	1.00	47.98
ATOM	4104	N PRO B 940	23.038	-1.976	-17.549	1.00	51.95
ATOM	4105	CA PRO B 940	23.306	-1.620	-16.151	1.00	51.29
ATOM	4106	C PRO B 940	22.397	-0.511	-15.667	1.00	51.06
ATOM	4107	O PRO B 940	21.776	0.173	-16.469	1.00	52.57
ATOM	4108	CB PRO B 940	24.751	-1.146	-16.184	1.00	50.42
ATOM	4109	CG PRO B 940	25.325	-1.852	-17.362	1.00	52.89
ATOM	4110	CD PRO B 940	24.233	-1.750	-18.376	1.00	50.94
ATOM	4111	N GLN B 941	22.343	-0.324	-14.354	1.00	50.66
ATOM	4112	CA GLN B 941	21.535	0.725	-13.760	1.00	48.49
ATOM	4113	C GLN B 941	22.339	2.010	-13.777	1.00	46.91
ATOM	4114	O GLN B 941	23.409	2.089	-13.200	1.00	47.29
ATOM	4115	CB GLN B 941	21.151	0.357	-12.324	1.00	48.25
ATOM	4116	CG GLN B 941	20.480	1.481	-11.554	1.00	49.45
ATOM	4117	CD GLN B 941	19.811	1.011	-10.271	1.00	52.87
ATOM	4118	OE1 GLN B 941	19.261	1.815	-9.512	1.00	52.38
ATOM	4119	NE2 GLN B 941	19.842	-0.296	-10.026	1.00	55.49
ATOM	4120	N PRO B 942	21.838	3.038	-14.460	1.00	48.21
ATOM	4121	CA PRO B 942	22.613	4.278	-14.477	1.00	49.11
ATOM	4122	C PRO B 942	22.849	4.807	-13.059	1.00	50.71
ATOM	4123	O PRO B 942	21.954	4.803	-12.216	1.00	51.40
ATOM	4124	CB PRO B 942	21.745	5.216	-15.315	1.00	46.82
ATOM	4125	CG PRO B 942	21.020	4.271	-16.223	1.00	47.86
ATOM	4126	CD PRO B 942	20.629	3.159	-15.289	1.00	45.98
ATOM	4127	N PRO B 943	24.070	5.264	-12.782	1.00	51.83

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ATOM	4128	CA	PRO B 943	24.474	5.807	-11.484	1.00	51.12
ATOM	4129	C	PRO B 943	23.470	6.802	-10.898	1.00	51.11
ATOM	4130	O	PRO B 943	23.110	6.713	-9.723	1.00	51.29
ATOM	4131	CB	PRO B 943	25.803	6.482	-11.805	1.00	52.65
ATOM	4132	CG	PRO B 943	26.371	5.605	-12.856	1.00	52.13
ATOM	4133	CD	PRO B 943	25.183	5.320	-13.744	1.00	52.53
ATOM	4134	N	ILE B 944	23.028	7.748	-11.726	1.00	50.00
ATOM	4135	CA	ILE B 944	22.099	8.792	-11.299	1.00	48.49
ATOM	4136	C	ILE B 944	20.658	8.315	-11.174	1.00	49.21
ATOM	4137	O	ILE B 944	19.785	9.043	-10.681	1.00	49.19
ATOM	4138	CB	ILE B 944	22.117	9.983	-12.291	1.00	48.25
ATOM	4139	CG1	ILE B 944	21.350	9.618	-13.571	1.00	43.64
ATOM	4140	CG2	ILE B 944	23.557	10.345	-12.625	1.00	45.88
ATOM	4141	CD1	ILE B 944	21.185	10.768	-14.509	1.00	44.55
ATOM	4142	N	CYS B 945	20.414	7.091	-11.623	1.00	49.20
ATOM	4143	CA	CYS B 945	19.076	6.532	-11.595	1.00	50.25
ATOM	4144	C	CYS B 945	18.623	6.005	-10.260	1.00	50.70
ATOM	4145	O	CYS B 945	19.357	5.323	-9.553	1.00	53.59
ATOM	4146	CB	CYS B 945	18.933	5.413	-12.630	1.00	50.33
ATOM	4147	SG	CYS B 945	18.662	5.990	-14.307	1.00	50.97
ATOM	4148	N	THR B 946	17.388	6.339	-9.930	1.00	49.35
ATOM	4149	CA	THR B 946	16.765	5.883	-8.710	1.00	49.02
ATOM	4150	C	THR B 946	16.161	4.554	-9.197	1.00	48.52
ATOM	4151	O	THR B 946	15.777	4.457	-10.360	1.00	49.59
ATOM	4152	CB	THR B 946	15.682	6.905	-8.282	1.00	46.42
ATOM	4153	OG1	THR B 946	15.473	6.829	-6.872	1.00	47.27
ATOM	4154	CG2	THR B 946	14.386	6.650	-9.002	1.00	43.71
ATOM	4155	N	ILE B 947	16.100	3.527	-8.357	1.00	48.32
ATOM	4156	CA	ILE B 947	15.546	2.252	-8.821	1.00	48.32
ATOM	4157	C	ILE B 947	14.151	2.434	-9.422	1.00	48.84
ATOM	4158	O	ILE B 947	13.685	1.600	-10.196	1.00	49.30
ATOM	4159	CB	ILE B 947	15.478	1.180	-7.696	1.00	46.78
ATOM	4160	CG1	ILE B 947	15.096	-0.176	-8.312	1.00	49.09
ATOM	4161	CG2	ILE B 947	14.467	1.593	-6.627	1.00	46.28
ATOM	4162	CD1	ILE B 947	15.017	-1.363	-7.331	1.00	49.14
ATOM	4163	N	ASP B 948	13.491	3.532	-9.075	1.00	49.00
ATOM	4164	CA	ASP B 948	12.162	3.808	-9.611	1.00	50.27
ATOM	4165	C	ASP B 948	12.247	3.963	-11.134	1.00	49.29
ATOM	4166	O	ASP B 948	11.403	3.440	-11.874	1.00	48.74
ATOM	4167	CB	ASP B 948	11.602	5.098	-9.002	1.00	53.06
ATOM	4168	CG	ASP B 948	11.377	4.995	-7.503	1.00	53.88
ATOM	4169	OD1	ASP B 948	10.208	4.869	-7.094	1.00	54.68
ATOM	4170	OD2	ASP B 948	12.363	5.044	-6.736	1.00	55.07
ATOM	4171	N	VAL B 949	13.272	4.691	-11.583	1.00	47.43
ATOM	4172	CA	VAL B 949	13.515	4.940	-13.001	1.00	45.11

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ATOM	4173	C	VAL B 949	14.030	3.686	-13.692	1.00	46.35
ATOM	4174	O	VAL B 949	13.546	3.304	-14.767	1.00	46.15
ATOM	4175	CB	VAL B 949	14.576	6.043	-13.208	1.00	44.06
ATOM	4176	CG1	VAL B 949	14.835	6.254	-14.696	1.00	41.72
ATOM	4177	CG2	VAL B 949	14.128	7.325	-12.565	1.00	40.72
ATOM	4178	N	TYR B 950	15.019	3.050	-13.068	1.00	46.25
ATOM	4179	CA	TYR B 950	15.613	1.850	-13.629	1.00	46.35
ATOM	4180	C	TYR B 950	14.590	0.760	-13.932	1.00	45.76
ATOM	4181	O	TYR B 950	14.665	0.122	-14.977	1.00	43.83
ATOM	4182	CB	TYR B 950	16.689	1.297	-12.694	1.00	46.54
ATOM	4183	CG	TYR B 950	17.528	0.203	-13.325	1.00	49.48
ATOM	4184	CD1	TYR B 950	18.209	0.422	-14.524	1.00	48.95
ATOM	4185	CD2	TYR B 950	17.649	-1.050	-12.721	1.00	51.79
ATOM	4186	CE1	TYR B 950	18.986	-0.571	-15.105	1.00	49.83
ATOM	4187	CE2	TYR B 950	18.428	-2.057	-13.294	1.00	51.29
ATOM	4188	CZ	TYR B 950	19.096	-1.809	-14.485	1.00	51.48
ATOM	4189	OH	TYR B 950	19.891	-2.785	-15.041	1.00	49.38
ATOM	4190	N	MET B 951	13.636	0.547	-13.030	1.00	46.47
ATOM	4191	CA	MET B 951	12.630	-0.484	-13.258	1.00	47.95
ATOM	4192	C	MET B 951	11.790	-0.156	-14.480	1.00	47.93
ATOM	4193	O	MET B 951	11.274	-1.059	-15.152	1.00	50.04
ATOM	4194	CB	MET B 951	11.741	-0.679	-12.026	1.00	49.33
ATOM	4195	CG	MET B 951	12.514	-1.169	-10.798	1.00	55.37
ATOM	4196	SD	MET B 951	13.753	-2.470	-11.188	1.00	62.22
ATOM	4197	CE	MET B 951	12.677	-3.817	-11.608	1.00	59.62
ATOM	4198	N	VAL B 952	11.650	1.128	-14.784	1.00	45.24
ATOM	4199	CA	VAL B 952	10.896	1.494	-15.971	1.00	44.94
ATOM	4200	C	VAL B 952	11.668	0.969	-17.194	1.00	44.46
ATOM	4201	O	VAL B 952	11.113	0.260	-18.037	1.00	42.31
ATOM	4202	CB	VAL B 952	10.694	3.031	-16.067	1.00	44.63
ATOM	4203	CG1	VAL B 952	10.122	3.407	-17.423	1.00	40.56
ATOM	4204	CG2	VAL B 952	9.738	3.489	-14.971	1.00	42.36
ATOM	4205	N	MET B 953	12.954	1.300	-17.269	1.00	44.54
ATOM	4206	CA	MET B 953	13.789	0.846	-18.377	1.00	45.71
ATOM	4207	C	MET B 953	13.760	-0.677	-18.498	1.00	45.34
ATOM	4208	O	MET B 953	13.606	-1.218	-19.598	1.00	44.65
ATOM	4209	CB	MET B 953	15.227	1.307	-18.179	1.00	46.83
ATOM	4210	CG	MET B 953	15.396	2.800	-18.224	1.00	52.42
ATOM	4211	SD	MET B 953	16.973	3.296	-17.565	1.00	57.82
ATOM	4212	CE	MET B 953	16.787	5.046	-17.587	1.00	57.27
ATOM	4213	N	VAL B 954	13.903	-1.365	-17.369	1.00	43.09
ATOM	4214	CA	VAL B 954	13.891	-2.815	-17.375	1.00	43.36
ATOM	4215	C	VAL B 954	12.588	-3.343	-17.961	1.00	43.58
ATOM	4216	O	VAL B 954	12.605	-4.189	-18.857	1.00	41.66
ATOM	4217	CB	VAL B 954	14.094	-3.379	-15.961	1.00	43.56

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ATOM	4218	CG1 VAL B 954	14.037	-4.883	-15.993	1.00	45.22
ATOM	4219	CG2 VAL B 954	15.439	-2.946	-15.430	1.00	44.09
ATOM	4220	N LYS B 955	11.459	-2.827	-17.476	1.00	44.30
ATOM	4221	CA LYS B 955	10.158	-3.262	-17.982	1.00	44.82
ATOM	4222	C LYS B 955	10.096	-3.192	-19.504	1.00	44.68
ATOM	4223	O LYS B 955	9.542	-4.072	-20.160	1.00	46.69
ATOM	4224	CB LYS B 955	9.041	-2.410	-17.391	1.00	46.61
ATOM	4225	CG LYS B 955	8.647	-2.770	-15.972	1.00	46.76
ATOM	4226	CD LYS B 955	7.588	-1.812	-15.500	1.00	47.23
ATOM	4227	CE LYS B 955	7.121	-2.128	-14.119	1.00	48.72
ATOM	4228	NZ LYS B 955	6.636	-0.872	-13.502	1.00	52.38
ATOM	4229	N CYS B 956	10.665	-2.139	-20.066	1.00	43.75
ATOM	4230	CA CYS B 956	10.682	-1.978	-21.509	1.00	43.94
ATOM	4231	C CYS B 956	11.396	-3.138	-22.195	1.00	45.19
ATOM	4232	O CYS B 956	11.205	-3.365	-23.397	1.00	43.93
ATOM	4233	CB CYS B 956	11.410	-0.692	-21.883	1.00	42.14
ATOM	4234	SG CYS B 956	10.593	0.788	-21.373	1.00	41.02
ATOM	4235	N TRP B 957	12.221	-3.860	-21.433	1.00	44.92
ATOM	4236	CA TRP B 957	12.995	-4.957	-21.995	1.00	45.41
ATOM	4237	C TRP B 957	12.543	-6.352	-21.592	1.00	47.76
ATOM	4238	O TRP B 957	13.328	-7.295	-21.641	1.00	47.21
ATOM	4239	CB TRP B 957	14.477	-4.783	-21.645	1.00	41.77
ATOM	4240	CG TRP B 957	15.012	-3.417	-21.957	1.00	38.80
ATOM	4241	CD1 TRP B 957	14.764	-2.680	-23.074	1.00	38.90
ATOM	4242	CD2 TRP B 957	15.910	-2.633	-21.150	1.00	37.82
ATOM	4243	NE1 TRP B 957	15.444	-1.482	-23.019	1.00	39.19
ATOM	4244	CE2 TRP B 957	16.159	-1.429	-21.851	1.00	37.54
ATOM	4245	CE3 TRP B 957	16.528	-2.832	-19.907	1.00	36.20
ATOM	4246	CZ2 TRP B 957	17.004	-0.425	-21.353	1.00	36.54
ATOM	4247	CZ3 TRP B 957	17.366	-1.835	-19.414	1.00	39.57
ATOM	4248	CH2 TRP B 957	17.596	-0.643	-20.142	1.00	36.55
ATOM	4249	N MET B 958	11.289	-6.491	-21.185	1.00	49.98
ATOM	4250	CA MET B 958	10.793	-7.810	-20.828	1.00	50.86
ATOM	4251	C MET B 958	10.806	-8.612	-22.115	1.00	50.79
ATOM	4252	O MET B 958	10.734	-8.045	-23.205	1.00	49.90
ATOM	4253	CB MET B 958	9.373	-7.731	-20.264	1.00	52.90
ATOM	4254	CG MET B 958	9.295	-7.075	-18.896	1.00	55.44
ATOM	4255	SD MET B 958	10.524	-7.763	-17.765	1.00	57.70
ATOM	4256	CE MET B 958	9.531	-9.050	-16.941	1.00	59.85
ATOM	4257	N ILE B 959	10.914	-9.927	-21.998	1.00	51.99
ATOM	4258	CA ILE B 959	10.955	-10.768	-23.184	1.00	53.60
ATOM	4259	C ILE B 959	9.611	-10.696	-23.888	1.00	52.84
ATOM	4260	O ILE B 959	9.536	-10.632	-25.111	1.00	52.06
ATOM	4261	CB ILE B 959	11.251	-12.232	-22.823	1.00	55.50
ATOM	4262	CG1 ILE B 959	12.621	-12.335	-22.135	1.00	59.93

ATOM	4263	CG2 ILE B 959	11.235 -13.079 -24.090	1.00	56.33
ATOM	4264	CD1 ILE B 959	12.904 -13.710 -21.482	1.00	62.42
ATOM	4265	N ASP B 960	8.551 -10.695 -23.093	1.00	53.61
ATOM	4266	CA ASP B 960	7.192 -10.625 -23.610	1.00	54.49
ATOM	4267	C ASP B 960	6.860 -9.199 -24.063	1.00	52.87
ATOM	4268	O ASP B 960	6.711 -8.290 -23.250	1.00	50.14
ATOM	4269	CB ASP B 960	6.212 -11.072 -22.528	1.00	57.08
ATOM	4270	CG ASP B 960	4.851 -11.400 -23.081	1.00	61.48
ATOM	4271	OD1 ASP B 960	4.233 -10.509 -23.706	1.00	65.36
ATOM	4272	OD2 ASP B 960	4.395 -12.550 -22.891	1.00	64.23
ATOM	4273	N ALA B 961	6.745 -9.020 -25.371	1.00	52.25
ATOM	4274	CA ALA B 961	6.438 -7.722 -25.950	1.00	53.15
ATOM	4275	C ALA B 961	5.192 -7.090 -25.339	1.00	54.47
ATOM	4276	O ALA B 961	5.188 -5.902 -25.013	1.00	54.47
ATOM	4277	CB ALA B 961	6.263 -7.864 -27.449	1.00	49.84
ATOM	4278	N ASP B 962	4.140 -7.888 -25.182	1.00	56.23
ATOM	4279	CA ASP B 962	2.888 -7.393 -24.618	1.00	57.94
ATOM	4280	C ASP B 962	2.943 -7.036 -23.135	1.00	56.89
ATOM	4281	O ASP B 962	2.045 -6.358 -22.632	1.00	57.51
ATOM	4282	CB ASP B 962	1.748 -8.396 -24.840	1.00	60.84
ATOM	4283	CG ASP B 962	1.280 -8.451 -26.289	1.00	64.87
ATOM	4284	OD1 ASP B 962	1.123 -7.376 -26.915	1.00	66.69
ATOM	4285	OD2 ASP B 962	1.054 -9.575 -26.794	1.00	67.24
ATOM	4286	N SER B 963	3.973 -7.481 -22.422	1.00	54.15
ATOM	4287	CA SER B 963	4.050 -7.144 -21.008	1.00	52.47
ATOM	4288	C SER B 963	4.973 -5.954 -20.761	1.00	50.73
ATOM	4289	O SER B 963	5.319 -5.646 -19.623	1.00	51.91
ATOM	4290	CB SER B 963	4.502 -8.354 -20.188	1.00	53.91
ATOM	4291	OG SER B 963	5.814 -8.753 -20.531	1.00	56.30
ATOM	4292	N ARG B 964	5.380 -5.288 -21.835	1.00	48.87
ATOM	4293	CA ARG B 964	6.235 -4.115 -21.710	1.00	47.43
ATOM	4294	C ARG B 964	5.327 -2.916 -21.536	1.00	45.64
ATOM	4295	O ARG B 964	4.202 -2.898 -22.036	1.00	46.22
ATOM	4296	CB ARG B 964	7.079 -3.914 -22.964	1.00	46.37
ATOM	4297	CG ARG B 964	8.058 -5.025 -23.230	1.00	47.48
ATOM	4298	CD ARG B 964	8.697 -4.888 -24.604	1.00	46.80
ATOM	4299	NE ARG B 964	9.474 -6.074 -24.930	1.00	47.04
ATOM	4300	CZ ARG B 964	9.889 -6.388 -26.149	1.00	46.77
ATOM	4301	NH1 ARG B 964	9.609 -5.600 -27.174	1.00	46.76
ATOM	4302	NH2 ARG B 964	10.564 -7.507 -26.343	1.00	48.41
ATOM	4303	N PRO B 965	5.800 -1.890 -20.831	1.00	43.80
ATOM	4304	CA PRO B 965	4.915 -0.733 -20.671	1.00	43.62
ATOM	4305	C PRO B 965	4.533 -0.150 -22.022	1.00	42.50
ATOM	4306	O PRO B 965	5.260 -0.301 -23.005	1.00	43.40
ATOM	4307	CB PRO B 965	5.743 0.226 -19.821	1.00	42.89

ATOM	4308	CG	PRO B 965	7.161	-0.156	-20.152	1.00	45.29
ATOM	4309	CD	PRO B 965	7.122	-1.653	-20.233	1.00	43.22
ATOM	4310	N	LYS B 966	3.373	0.490	-22.080	1.00	40.83
ATOM	4311	CA	LYS B 966	2.932	1.102	-23.313	1.00	40.21
ATOM	4312	C	LYS B 966	3.289	2.583	-23.303	1.00	39.83
ATOM	4313	O	LYS B 966	3.423	3.189	-22.232	1.00	38.40
ATOM	4314	CB	LYS B 966	1.446	0.861	-23.491	1.00	41.77
ATOM	4315	CG	LYS B 966	1.194	-0.588	-23.796	1.00	47.30
ATOM	4316	CD	LYS B 966	-0.223	-0.888	-24.170	1.00	51.96
ATOM	4317	CE	LYS B 966	-0.392	-2.395	-24.327	1.00	57.53
ATOM	4318	NZ	LYS B 966	-1.831	-2.804	-24.235	1.00	61.18
ATOM	4319	N	PHE B 967	3.469	3.167	-24.485	1.00	38.02
ATOM	4320	CA	PHE B 967	3.866	4.569	-24.547	1.00	40.61
ATOM	4321	C	PHE B 967	2.998	5.514	-23.741	1.00	41.52
ATOM	4322	O	PHE B 967	3.509	6.479	-23.180	1.00	42.24
ATOM	4323	CB	PHE B 967	4.007	5.032	-26.004	1.00	38.99
ATOM	4324	CG	PHE B 967	5.289	4.572	-26.648	1.00	38.22
ATOM	4325	CD1	PHE B 967	5.279	3.891	-27.858	1.00	37.36
ATOM	4326	CD2	PHE B 967	6.510	4.769	-26.002	1.00	37.25
ATOM	4327	CE1	PHE B 967	6.477	3.405	-28.417	1.00	42.23
ATOM	4328	CE2	PHE B 967	7.712	4.287	-26.551	1.00	39.11
ATOM	4329	CZ	PHE B 967	7.698	3.605	-27.756	1.00	39.07
ATOM	4330	N	ALA B 968	1.701	5.223	-23.652	1.00	42.04
ATOM	4331	CA	ALA B 968	0.792	6.059	-22.872	1.00	44.04
ATOM	4332	C	ALA B 968	1.210	6.066	-21.398	1.00	46.45
ATOM	4333	O	ALA B 968	1.146	7.098	-20.729	1.00	46.84
ATOM	4334	CB	ALA B 968	-0.650	5.549	-22.998	1.00	42.69
ATOM	4335	N	GLU B 969	1.640	4.913	-20.895	1.00	46.92
ATOM	4336	CA	GLU B 969	2.048	4.804	-19.503	1.00	47.61
ATOM	4337	C	GLU B 969	3.420	5.396	-19.227	1.00	47.48
ATOM	4338	O	GLU B 969	3.637	6.015	-18.182	1.00	47.99
ATOM	4339	CB	GLU B 969	2.079	3.349	-19.065	1.00	51.22
ATOM	4340	CG	GLU B 969	0.851	2.539	-19.384	1.00	57.69
ATOM	4341	CD	GLU B 969	1.087	1.070	-19.086	1.00	62.44
ATOM	4342	OE1	GLU B 969	1.928	0.442	-19.771	1.00	63.17
ATOM	4343	OE2	GLU B 969	0.446	0.546	-18.151	1.00	68.35
ATOM	4344	N	LEU B 970	4.362	5.182	-20.138	1.00	45.82
ATOM	4345	CA	LEU B 970	5.699	5.704	-19.917	1.00	44.09
ATOM	4346	C	LEU B 970	5.597	7.211	-19.807	1.00	44.59
ATOM	4347	O	LEU B 970	6.152	7.819	-18.890	1.00	45.03
ATOM	4348	CB	LEU B 970	6.645	5.276	-21.050	1.00	43.43
ATOM	4349	CG	LEU B 970	7.053	3.782	-21.016	1.00	43.26
ATOM	4350	CD1	LEU B 970	7.660	3.340	-22.331	1.00	40.75
ATOM	4351	CD2	LEU B 970	8.029	3.551	-19.887	1.00	40.19
ATOM	4352	N	ALA B 971	4.849	7.815	-20.718	1.00	44.94

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ATOM	4353	CA	ALA B 971	4.684	9.257	-20.690	1.00	45.01
ATOM	4354	C	ALA B 971	4.093	9.663	-19.350	1.00	46.07
ATOM	4355	O	ALA B 971	4.559	10.602	-18.709	1.00	48.26
ATOM	4356	CB	ALA B 971	3.782	9.699	-21.806	1.00	43.14
ATOM	4357	N	ALA B 972	3.075	8.939	-18.919	1.00	43.91
ATOM	4358	CA	ALA B 972	2.435	9.242	-17.660	1.00	46.47
ATOM	4359	C	ALA B 972	3.386	9.110	-16.466	1.00	48.41
ATOM	4360	O	ALA B 972	3.481	10.018	-15.635	1.00	50.02
ATOM	4361	CB	ALA B 972	1.233	8.339	-17.474	1.00	46.27
ATOM	4362	N	GLU B 973	4.092	7.988	-16.377	1.00	49.34
ATOM	4363	CA	GLU B 973	5.003	7.768	-15.259	1.00	50.14
ATOM	4364	C	GLU B 973	6.160	8.769	-15.233	1.00	49.00
ATOM	4365	O	GLU B 973	6.488	9.309	-14.182	1.00	47.51
ATOM	4366	CB	GLU B 973	5.537	6.330	-15.295	1.00	53.73
ATOM	4367	CG	GLU B 973	6.424	5.917	-14.120	1.00	58.85
ATOM	4368	CD	GLU B 973	5.733	6.039	-12.764	1.00	64.87
ATOM	4369	OE1	GLU B 973	4.555	5.625	-12.644	1.00	67.25
ATOM	4370	OE2	GLU B 973	6.374	6.540	-11.808	1.00	67.54
ATOM	4371	N	PHE B 974	6.784	9.026	-16.376	1.00	47.15
ATOM	4372	CA	PHE B 974	7.892	9.970	-16.385	1.00	46.71
ATOM	4373	C	PHE B 974	7.340	11.351	-16.178	1.00	47.30
ATOM	4374	O	PHE B 974	8.017	12.242	-15.672	1.00	45.15
ATOM	4375	CB	PHE B 974	8.649	9.898	-17.700	1.00	44.76
ATOM	4376	CG	PHE B 974	9.648	8.794	-17.742	1.00	45.39
ATOM	4377	CD1	PHE B 974	10.790	8.851	-16.952	1.00	43.84
ATOM	4378	CD2	PHE B 974	9.433	7.669	-18.533	1.00	44.99
ATOM	4379	CE1	PHE B 974	11.705	7.800	-16.946	1.00	43.56
ATOM	4380	CE2	PHE B 974	10.343	6.612	-18.531	1.00	44.73
ATOM	4381	CZ	PHE B 974	11.480	6.680	-17.734	1.00	43.10
ATOM	4382	N	SER B 975	6.082	11.509	-16.564	1.00	48.14
ATOM	4383	CA	SER B 975	5.393	12.775	-16.427	1.00	48.35
ATOM	4384	C	SER B 975	5.302	13.184	-14.953	1.00	48.95
ATOM	4385	O	SER B 975	5.666	14.305	-14.589	1.00	49.88
ATOM	4386	CB	SER B 975	3.999	12.661	-17.040	1.00	48.77
ATOM	4387	OG	SER B 975	3.325	13.899	-17.030	1.00	52.34
ATOM	4388	N	ARG B 976	4.831	12.287	-14.093	1.00	47.45
ATOM	4389	CA	ARG B 976	4.732	12.658	-12.697	1.00	47.19
ATOM	4390	C	ARG B 976	6.105	12.708	-12.029	1.00	47.91
ATOM	4391	O	ARG B 976	6.298	13.433	-11.055	1.00	48.07
ATOM	4392	CB	ARG B 976	3.771	11.721	-11.942	1.00	47.00
ATOM	4393	CG	ARG B 976	4.268	10.343	-11.695	1.00	48.59
ATOM	4394	CD	ARG B 976	3.392	9.578	-10.696	1.00	51.30
ATOM	4395	NE	ARG B 976	4.049	8.319	-10.349	1.00	53.72
ATOM	4396	CZ	ARG B 976	5.139	8.240	-9.593	1.00	56.06
ATOM	4397	NH1	ARG B 976	5.697	7.066	-9.337	1.00	58.55

ATOM	4398	NH2 ARG B 976	5.652	9.337	-9.056	1.00	57.80
ATOM	4399	N MET B 977	7.065	11.960	-12.558	1.00	49.05
ATOM	4400	CA MET B 977	8.407	11.967	-11.988	1.00	51.32
ATOM	4401	C MET B 977	9.021	13.332	-12.249	1.00	52.43
ATOM	4402	O MET B 977	9.887	13.796	-11.503	1.00	52.50
ATOM	4403	CB MET B 977	9.269	10.854	-12.604	1.00	52.10
ATOM	4404	CG MET B 977	9.056	9.489	-11.939	1.00	54.48
ATOM	4405	SD MET B 977	9.708	8.090	-12.871	1.00	54.18
ATOM	4406	CE MET B 977	11.338	8.258	-12.532	1.00	54.40
ATOM	4407	N ALA B 978	8.548	13.981	-13.309	1.00	53.20
ATOM	4408	CA ALA B 978	9.030	15.303	-13.672	1.00	52.59
ATOM	4409	C ALA B 978	8.429	16.332	-12.714	1.00	53.53
ATOM	4410	O ALA B 978	8.910	17.468	-12.625	1.00	53.68
ATOM	4411	CB ALA B 978	8.647	15.621	-15.112	1.00	49.91
ATOM	4412	N ARG B 979	7.379	15.936	-11.999	1.00	53.98
ATOM	4413	CA ARG B 979	6.749	16.836	-11.042	1.00	57.90
ATOM	4414	C ARG B 979	7.590	16.920	-9.767	1.00	59.18
ATOM	4415	O ARG B 979	7.417	17.834	-8.970	1.00	61.14
ATOM	4416	CB ARG B 979	5.329	16.367	-10.704	1.00	59.68
ATOM	4417	CG ARG B 979	4.322	16.484	-11.856	1.00	61.54
ATOM	4418	CD ARG B 979	3.022	15.725	-11.544	1.00	61.64
ATOM	4419	NE ARG B 979	2.376	15.243	-12.766	1.00	63.13
ATOM	4420	CZ ARG B 979	1.427	14.309	-12.809	1.00	62.83
ATOM	4421	NH1 ARG B 979	0.989	13.740	-11.690	1.00	63.57
ATOM	4422	NH2 ARG B 979	0.931	13.924	-13.980	1.00	62.38
ATOM	4423	N ASP B 980	8.496	15.964	-9.583	1.00	59.01
ATOM	4424	CA ASP B 980	9.384	15.936	-8.422	1.00	59.63
ATOM	4425	C ASP B 980	10.685	15.245	-8.872	1.00	60.07
ATOM	4426	O ASP B 980	11.062	14.183	-8.362	1.00	58.65
ATOM	4427	CB ASP B 980	8.709	15.177	-7.262	1.00	60.54
ATOM	4428	CG ASP B 980	9.456	15.334	-5.922	1.00	62.11
ATOM	4429	OD1 ASP B 980	10.255	16.288	-5.765	1.00	61.29
ATOM	4430	OD2 ASP B 980	9.226	14.502	-5.015	1.00	61.48
ATOM	4431	N PRO B 981	11.392	15.865	-9.837	1.00	59.64
ATOM	4432	CA PRO B 981	12.651	15.412	-10.445	1.00	60.15
ATOM	4433	C PRO B 981	13.831	14.975	-9.573	1.00	60.53
ATOM	4434	O PRO B 981	14.609	14.114	-9.986	1.00	60.77
ATOM	4435	CB PRO B 981	13.025	16.574	-11.372	1.00	58.58
ATOM	4436	CG PRO B 981	12.393	17.753	-10.726	1.00	57.47
ATOM	4437	CD PRO B 981	11.049	17.213	-10.331	1.00	58.74
ATOM	4438	N GLN B 982	13.981	15.558	-8.386	1.00	61.15
ATOM	4439	CA GLN B 982	15.102	15.197	-7.521	1.00	60.07
ATOM	4440	C GLN B 982	14.854	13.919	-6.745	1.00	57.60
ATOM	4441	O GLN B 982	15.774	13.355	-6.167	1.00	56.36
ATOM	4442	CB GLN B 982	15.427	16.339	-6.559	1.00	63.51

ATOM	4443	CG	GLN B 982	16.078	17.547	-7.228	1.00	66.46
ATOM	4444	CD	GLN B 982	16.277	18.713	-6.272	1.00	69.16
ATOM	4445	OE1	GLN B 982	15.811	18.681	-5.134	1.00	72.71
ATOM	4446	NE2	GLN B 982	16.977	19.745	-6.729	1.00	70.65
ATOM	4447	N	ARG B 983	13.607	13.464	-6.745	1.00	56.49
ATOM	4448	CA	ARG B 983	13.221	12.230	-6.062	1.00	54.51
ATOM	4449	C	ARG B 983	13.456	11.011	-6.955	1.00	52.63
ATOM	4450	O	ARG B 983	13.445	9.870	-6.489	1.00	51.88
ATOM	4451	CB	ARG B 983	11.741	12.280	-5.693	1.00	54.81
ATOM	4452	CG	ARG B 983	11.219	11.016	-5.031	1.00	56.29
ATOM	4453	CD	ARG B 983	9.712	11.054	-4.892	1.00	57.50
ATOM	4454	NE	ARG B 983	9.214	9.997	-4.018	1.00	58.23
ATOM	4455	CZ	ARG B 983	7.924	9.735	-3.834	1.00	57.38
ATOM	4456	NH1	ARG B 983	7.003	10.452	-4.469	1.00	56.60
ATOM	4457	NH2	ARG B 983	7.556	8.765	-3.011	1.00	57.50
ATOM	4458	N	TYR B 984	13.673	11.257	-8.241	1.00	50.73
ATOM	4459	CA	TYR B 984	13.874	10.166	-9.172	1.00	50.45
ATOM	4460	C	TYR B 984	15.240	10.063	-9.855	1.00	48.61
ATOM	4461	O	TYR B 984	15.605	8.994	-10.339	1.00	48.45
ATOM	4462	CB	TYR B 984	12.724	10.175	-10.177	1.00	49.68
ATOM	4463	CG	TYR B 984	11.415	9.906	-9.468	1.00	53.31
ATOM	4464	CD1	TYR B 984	10.591	10.950	-9.047	1.00	54.83
ATOM	4465	CD2	TYR B 984	11.049	8.606	-9.118	1.00	54.60
ATOM	4466	CE1	TYR B 984	9.435	10.703	-8.289	1.00	54.57
ATOM	4467	CE2	TYR B 984	9.902	8.353	-8.361	1.00	55.09
ATOM	4468	CZ	TYR B 984	9.106	9.405	-7.952	1.00	54.72
ATOM	4469	OH	TYR B 984	7.984	9.146	-7.207	1.00	56.77
ATOM	4470	N	LEU B 985	15.996	11.157	-9.878	1.00	46.87
ATOM	4471	CA	LEU B 985	17.341	11.160	-10.459	1.00	46.02
ATOM	4472	C	LEU B 985	18.272	11.936	-9.519	1.00	46.87
ATOM	4473	O	LEU B 985	17.927	13.029	-9.063	1.00	45.27
ATOM	4474	CB	LEU B 985	17.344	11.812	-11.845	1.00	44.28
ATOM	4475	CG	LEU B 985	16.651	11.099	-13.001	1.00	43.30
ATOM	4476	CD1	LEU B 985	17.075	11.770	-14.289	1.00	43.28
ATOM	4477	CD2	LEU B 985	17.024	9.617	-13.037	1.00	43.77
ATOM	4478	N	VAL B 986	19.443	11.372	-9.226	1.00	46.59
ATOM	4479	CA	VAL B 986	20.381	12.023	-8.317	1.00	47.28
ATOM	4480	C	VAL B 986	21.628	12.479	-9.045	1.00	48.95
ATOM	4481	O	VAL B 986	22.479	11.675	-9.419	1.00	50.35
ATOM	4482	CB	VAL B 986	20.809	11.087	-7.179	1.00	49.66
ATOM	4483	CG1	VAL B 986	21.654	11.863	-6.171	1.00	48.82
ATOM	4484	CG2	VAL B 986	19.586	10.484	-6.507	1.00	48.62
ATOM	4485	N	ILE B 987	21.742	13.786	-9.214	1.00	49.22
ATOM	4486	CA	ILE B 987	22.854	14.377	-9.927	1.00	50.44
ATOM	4487	C	ILE B 987	23.496	15.472	-9.084	1.00	53.00

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ATOM	4488	O	ILE B 987	22.797	16.347	-8.568	1.00	53.10
ATOM	4489	CB	ILE B 987	22.341	14.991	-11.246	1.00	49.77
ATOM	4490	CG1	ILE B 987	21.671	13.902	-12.087	1.00	50.87
ATOM	4491	CG2	ILE B 987	23.465	15.666	-11.995	1.00	48.64
ATOM	4492	CD1	ILE B 987	20.856	14.444	-13.253	1.00	51.02
ATOM	4493	N	GLN B 988	24.820	15.427	-8.946	1.00	55.17
ATOM	4494	CA	GLN B 988	25.537	16.446	-8.185	1.00	56.54
ATOM	4495	C	GLN B 988	25.166	17.807	-8.757	1.00	58.14
ATOM	4496	O	GLN B 988	25.094	17.971	-9.975	1.00	57.08
ATOM	4497	CB	GLN B 988	27.047	16.245	-8.300	1.00	57.24
ATOM	4498	CG	GLN B 988	27.612	15.195	-7.370	1.00	58.82
ATOM	4499	CD	GLN B 988	29.129	15.143	-7.409	1.00	60.42
ATOM	4500	OE1	GLN B 988	29.725	14.831	-8.441	1.00	63.50
ATOM	4501	NE2	GLN B 988	29.763	15.448	-6.282	1.00	62.41
ATOM	4502	N	GLY B 989	24.951	18.784	-7.879	1.00	59.86
ATOM	4503	CA	GLY B 989	24.562	20.106	-8.332	1.00	62.53
ATOM	4504	C	GLY B 989	23.067	20.003	-8.486	1.00	64.69
ATOM	4505	O	GLY B 989	22.426	19.366	-7.661	1.00	65.23
ATOM	4506	N	ASP B 990	22.494	20.611	-9.516	1.00	67.44
ATOM	4507	CA	ASP B 990	21.053	20.475	-9.704	1.00	70.60
ATOM	4508	C	ASP B 990	20.352	20.808	-8.377	1.00	72.92
ATOM	4509	O	ASP B 990	19.373	20.165	-7.996	1.00	73.02
ATOM	4510	CB	ASP B 990	20.764	19.019	-10.136	1.00	68.29
ATOM	4511	CG	ASP B 990	19.376	18.821	-10.727	1.00	65.16
ATOM	4512	OD1	ASP B 990	18.904	19.688	-11.493	1.00	64.82
ATOM	4513	OD2	ASP B 990	18.764	17.771	-10.433	1.00	61.33
ATOM	4514	N	ALA B 991	20.862	21.814	-7.675	1.00	75.66
ATOM	4515	CA	ALA B 991	20.275	22.219	-6.399	1.00	79.01
ATOM	4516	C	ALA B 991	19.048	23.107	-6.615	1.00	80.54
ATOM	4517	O	ALA B 991	17.965	22.739	-6.100	1.00	81.75
ATOM	4518	CB	ALA B 991	21.317	22.948	-5.537	1.00	77.93
ATOM	4519	OXT	ALA B 991	19.180	24.153	-7.295	1.00	81.39
ATOM	4520	F1	LIG C 1	-21.453	16.649	-0.604	1.00	65.92
ATOM	4521	C2	LIG C 1	-21.069	17.936	-0.472	1.00	62.88
ATOM	4522	C3	LIG C 1	-19.922	18.287	0.383	1.00	60.99
ATOM	4523	C4	LIG C 1	-19.435	19.703	0.395	1.00	60.35
ATOM	4524	C5	LIG C 1	-20.135	20.740	-0.395	1.00	61.20
ATOM	4525	C6	LIG C 1	-21.331	20.391	-1.193	1.00	63.29
ATOM	4526	C7	LIG C 1	-21.800	18.979	-1.237	1.00	63.70
ATOM	4527	C8	LIG C 1	-18.188	20.151	1.138	1.00	58.87
ATOM	4528	O9	LIG C 1	-17.171	19.172	1.348	1.00	56.77
ATOM	4529	C10	LIG C 1	-16.358	18.640	0.332	1.00	55.56
ATOM	4530	C11	LIG C 1	-15.952	17.241	0.543	1.00	56.41
ATOM	4531	C12	LIG C 1	-15.101	16.562	-0.402	1.00	54.33
ATOM	4532	C13	LIG C 1	-14.603	17.275	-1.616	1.00	53.77

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ATOM	4533	C14	LIG C	1	-15.012	18.688	-1.848	1.00	55.54
ATOM	4534	C15	LIG C	1	-15.913	19.352	-0.900	1.00	54.37
ATOM	4535	N16	LIG C	1	-13.762	16.701	-2.549	1.00	49.69
ATOM	4536	C17	LIG C	1	-13.714	15.438	-3.082	1.00	50.51
ATOM	4537	N18	LIG C	1	-14.809	14.489	-2.937	1.00	49.27
ATOM	4538	C19	LIG C	1	-14.740	13.219	-3.533	1.00	49.13
ATOM	4539	N20	LIG C	1	-13.631	12.866	-4.316	1.00	48.53
ATOM	4540	C21	LIG C	1	-12.558	13.784	-4.480	1.00	50.01
ATOM	4541	C22	LIG C	1	-12.550	15.113	-3.834	1.00	50.59
ATOM	4542	S23	LIG C	1	-11.201	16.018	-4.243	1.00	54.32
ATOM	4543	C24	LIG C	1	-10.572	14.794	-5.310	1.00	54.73
ATOM	4544	C25	LIG C	1	-11.377	13.652	-5.309	1.00	52.56
ATOM	4545	CL2	LIG C	1	-16.406	16.290	1.907	1.00	58.80
ATOM	4546	C27	LIG C	1	-8.858	16.177	-6.594	1.00	59.22
ATOM	4547	C26	LIG C	1	-9.449	14.847	-6.122	1.00	55.07
ATOM	4548	F1	LIG D	1	10.853	15.135	-41.543	1.00	58.61
ATOM	4549	C2	LIG D	1	11.037	13.839	-41.713	1.00	54.55
ATOM	4550	C3	LIG D	1	12.223	13.471	-42.454	1.00	54.59
ATOM	4551	C4	LIG D	1	12.685	12.058	-42.421	1.00	55.40
ATOM	4552	C5	LIG D	1	11.870	11.031	-41.722	1.00	55.68
ATOM	4553	C6	LIG D	1	10.584	11.399	-41.086	1.00	55.06
ATOM	4554	C7	LIG D	1	10.166	12.828	-41.075	1.00	55.50
ATOM	4555	C8	LIG D	1	14.013	11.667	-43.046	1.00	55.59
ATOM	4556	O9	LIG D	1	14.925	12.754	-43.284	1.00	54.46
ATOM	4557	C10	LIG D	1	15.752	13.298	-42.283	1.00	54.12
ATOM	4558	C11	LIG D	1	16.205	14.668	-42.540	1.00	54.63
ATOM	4559	C12	LIG D	1	17.138	15.313	-41.638	1.00	54.53
ATOM	4560	C13	LIG D	1	17.592	14.617	-40.390	1.00	54.63
ATOM	4561	C14	LIG D	1	17.151	13.224	-40.122	1.00	54.98
ATOM	4562	C15	LIG D	1	16.212	12.590	-41.043	1.00	53.54
ATOM	4563	N16	LIG D	1	18.380	15.217	-39.444	1.00	52.13
ATOM	4564	C17	LIG D	1	18.311	16.478	-38.879	1.00	52.92
ATOM	4565	N18	LIG D	1	17.153	17.343	-38.997	1.00	52.67
ATOM	4566	C19	LIG D	1	17.111	18.603	-38.359	1.00	52.27
ATOM	4567	N20	LIG D	1	18.197	19.019	-37.573	1.00	52.85
ATOM	4568	C21	LIG D	1	19.370	18.189	-37.471	1.00	53.46
ATOM	4569	C22	LIG D	1	19.449	16.879	-38.137	1.00	52.71
ATOM	4570	S23	LIG D	1	20.838	16.039	-37.751	1.00	55.09
ATOM	4571	C24	LIG D	1	21.417	17.235	-36.656	1.00	55.61
ATOM	4572	C25	LIG D	1	20.602	18.381	-36.703	1.00	54.95
ATOM	4573	CL2	LIG D	1	15.733	15.611	-43.921	1.00	56.18
ATOM	4574	C27	LIG D	1	23.036	15.744	-35.342	1.00	59.16
ATOM	4575	C26	LIG D	1	22.474	17.108	-35.765	1.00	54.82
ATOM	4576	O	HOH E	1	-7.599	8.623	-13.123	1.00	62.46
ATOM	4577	O	HOH E	2	24.517	23.513	-28.035	1.00	64.27

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ATOM	4578	O	HOH	E	3	-20.296	13.666	15.285	1.00	63.01
ATOM	4579	O	HOH	E	4	-22.374	8.176	-7.192	1.00	49.42
ATOM	4580	O	HOH	E	5	-29.264	30.402	-15.340	1.00	37.27
ATOM	4581	O	HOH	E	6	-15.548	26.298	-3.002	1.00	60.28
ATOM	4582	O	HOH	E	7	-16.488	46.164	-1.672	1.00	37.96
ATOM	4583	O	HOH	E	8	-23.337	42.864	-22.019	1.00	54.63
ATOM	4584	O	HOH	E	9	11.610	18.211	-56.805	1.00	64.90
ATOM	4585	O	HOH	E	10	16.106	5.158	-39.459	1.00	71.20
ATOM	4586	O	HOH	E	11	24.422	-1.900	-32.376	1.00	37.06
ATOM	4587	O	HOH	E	12	18.940	-3.777	-26.629	1.00	37.73
ATOM	4588	O	HOH	E	13	2.846	1.640	-26.716	1.00	48.90
ATOM	4589	O	HOH	E	14	22.115	6.710	-30.625	1.00	46.15
ATOM	4590	O	HOH	E	15	27.166	-0.416	-20.681	1.00	52.66
ATOM	4591	O	HOH	E	16	27.370	0.625	-28.338	1.00	48.54
ATOM	4592	O	HOH	E	17	8.879	-10.943	-20.472	1.00	43.79
ATOM	4593	O	HOH	E	18	22.979	20.646	-12.884	1.00	55.83
ATOM	4594	O	HOH	E	19	-23.835	38.304	-2.575	1.00	46.63
ATOM	4595	O	HOH	E	20	3.858	19.802	-44.299	1.00	51.25
ATOM	4596	O	HOH	E	21	6.565	20.312	-34.549	1.00	67.07
ATOM	4597	O	HOH	E	22	6.762	22.561	-32.466	1.00	63.76
ATOM	4598	O	HOH	E	23	17.087	2.388	-32.802	1.00	50.29
ATOM	4599	O	HOH	E	24	19.085	-5.539	-28.680	1.00	47.97
ATOM	4600	O	HOH	E	25	8.303	-6.214	-39.578	1.00	53.88
ATOM	4601	O	HOH	E	26	24.363	7.903	-14.629	1.00	43.74
ATOM	4602	O	HOH	E	27	-27.032	11.186	2.400	1.00	74.22
ATOM	4603	O	HOH	E	28	-12.942	20.542	-5.335	1.00	44.65
ATOM	4604	O	HOH	E	29	-7.825	34.064	-9.696	1.00	36.01
ATOM	4605	O	HOH	E	30	6.161	13.446	-8.135	1.00	48.06
ATOM	4606	O	HOH	E	31	4.895	21.272	-54.439	1.00	37.34
ATOM	4607	O	HOH	E	32	14.560	16.150	-38.934	1.00	49.73
ATOM	4608	O	HOH	E	33	-17.191	16.196	-2.787	1.00	49.94
ATOM	4609	O	HOH	E	34	-12.431	16.753	-33.087	1.00	50.01
ATOM	4610	O	HOH	E	35	19.316	15.273	-8.990	1.00	41.76
ATOM	4611	O	HOH	E	36	22.919	-2.802	-12.770	1.00	32.09
ATOM	4612	O	HOH	E	37	-20.465	42.538	-22.926	1.00	48.88
ATOM	4613	O	HOH	E	38	24.551	-2.864	-35.433	1.00	38.92
ATOM	4614	O	HOH	E	39	10.469	2.554	-40.581	1.00	54.18
ATOM	4615	O	HOH	E	40	4.881	19.023	-24.625	1.00	58.60
ATOM	4616	O	HOH	E	41	18.317	10.202	-53.601	1.00	71.11
ATOM	4617	O	HOH	E	42	-13.865	22.064	10.271	1.00	57.28
ATOM	4618	O	HOH	E	43	-35.587	21.497	3.030	1.00	36.88
ATOM	4619	O	HOH	E	44	-26.803	14.899	-5.791	1.00	40.87
ATOM	4620	O	HOH	E	45	-24.968	8.964	-9.528	1.00	60.43
ATOM	4621	O	HOH	E	46	-18.782	34.826	-10.499	1.00	37.91
ATOM	4622	O	HOH	E	47	-15.030	29.928	-8.619	1.00	52.85

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